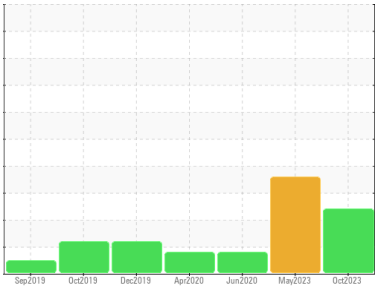
PROBLEM SUMMARY

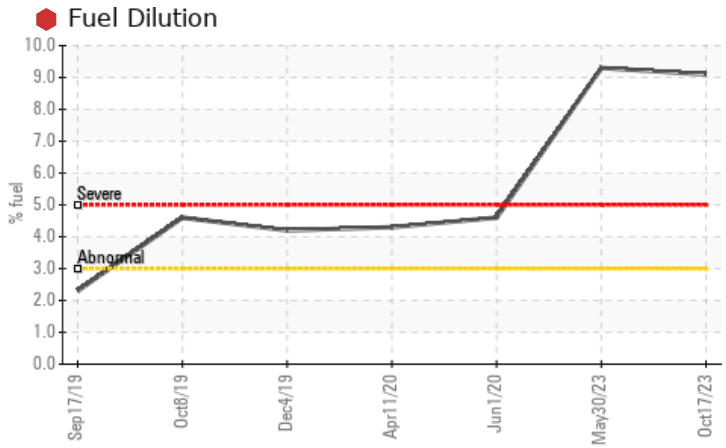
Machine Id
422031-402429
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

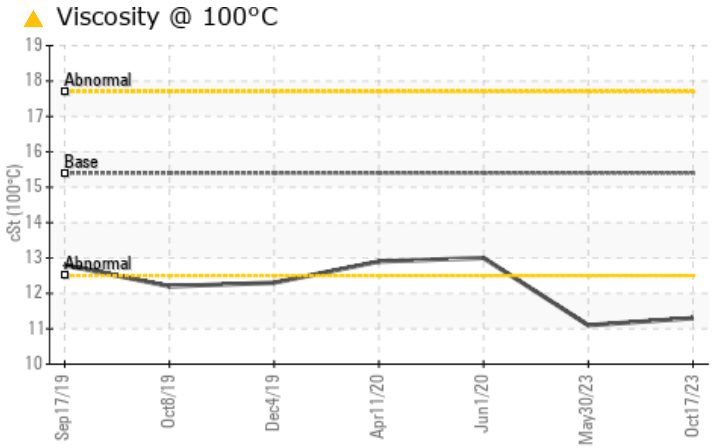
Sample Rating Trend



FUEL

COMPONENT CONDITION SUMMARY





RECOMMENDATION

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	SEVERE	ABNORMAL
Fuel	%	ASTM D3524	>3.0	**9.1**	9.3	4.6
Visc @ 100°C	cSt	ASTM D445	15.4	**11.3**	11.1	13

Customer Id: GFL865
Sample No.: GFL0093300
Lab Number: 05986031
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
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

30 May 2023 Diag: Don Baldridge

FUEL

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.All component wear rates are normal. There is a high amount of fuel present in the oil. Fuel is present in the oil and is lowering the viscosity. The BN level is low. The oil is no longer serviceable due to the presence of contaminants.

view report

01 Jun 2020 Diag: Wes Davis

FUEL

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. The fluid was not specified, however, a fluid match indicates that this fluid is SAE 40 Diesel Engine Oil. Please confirm the oil type and grade, and specify the brand of the oil on your next sample.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 oil is no longer serviceable due to the presence of contaminants.

view report

11 Apr 2020 Diag: Wes Davis

FUEL

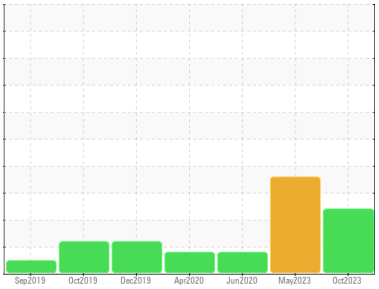
The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. The fluid was not specified, however, a fluid match indicates that this fluid is SAE 40 Diesel Engine Oil. Please confirm the oil type and grade, and specify the brand of the oil on your next sample.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 oil is no longer serviceable due to the presence of contaminants.

view report

OIL ANALYSIS REPORT

Machine Id
422031-402429
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

Sample Rating Trend



FUEL

DIAGNOSIS

Recommendation
We advise that you check the fuel injection system. The oil 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. Tests confirm the presence of fuel in the oil.

Fluid Condition
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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0093300**	GFL0083506	GFLH-445650
Sample Date		Client Info		**17 Oct 2023**	30 May 2023	01 Jun 2020
Machine Age	mls	Client Info		**552550**	3105	24321
Oil Age	mls	Client Info		**552550**	3105	0
Oil Changed		Client Info		**Changed**	Changed	N/A
Sample Status				**SEVERE**	SEVERE	ABNORMAL

CONTAMINATION	method	limit/base	current	history1	history2
Glycol	WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	**11**	24	4
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	0
Nickel	ppm	ASTM D5185m	>5	**<1**	<1	0
Titanium	ppm	ASTM D5185m	>2	**<1**	0	0
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**2**	2	4
Lead	ppm	ASTM D5185m	>40	**<1**	<1	0
Copper	ppm	ASTM D5185m	>330	**3**	5	0
Tin	ppm	ASTM D5185m	>15	**1**	<1	0
Antimony	ppm	ASTM D5185m		**---**	---	0
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	**0**	0	264
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	60	**49**	59	126
Manganese	ppm	ASTM D5185m	0	**<1**	<1	0
Magnesium	ppm	ASTM D5185m	1010	**765**	812	718
Calcium	ppm	ASTM D5185m	1070	**826**	975	1643
Phosphorus	ppm	ASTM D5185m	1150	**681**	852	705
Zinc	ppm	ASTM D5185m	1270	**1005**	1091	852
Sulfur	ppm	ASTM D5185m	2060	**2362**	2939	---
Lithium	ppm	ASTM D5185m		**---**	---	0

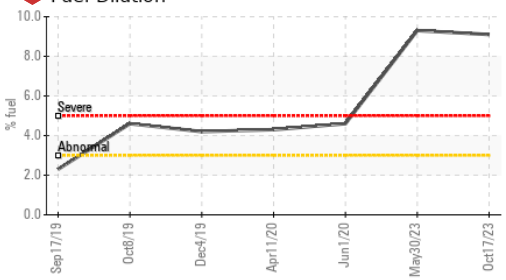
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**7**	6	5
Sodium	ppm	ASTM D5185m		**15**	34	6
Potassium	ppm	ASTM D5185m	>20	**5**	7	1
Fuel	%	ASTM D3524	>3.0	**9.1**	9.3	4.6

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>4	**0.2**	0.4	0
Nitration	Abs/cm	*ASTM D7624	>20	**10.0**	12.0	9
Sulfation	Abs/.1mm	*ASTM D7415	>30	**20.7**	24.7	---

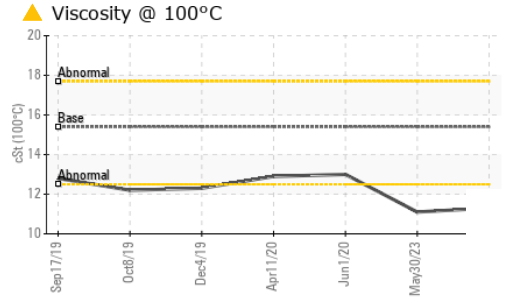
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**15.8**	18.7	15
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**3.6**	3.9	4.51

OIL ANALYSIS REPORT

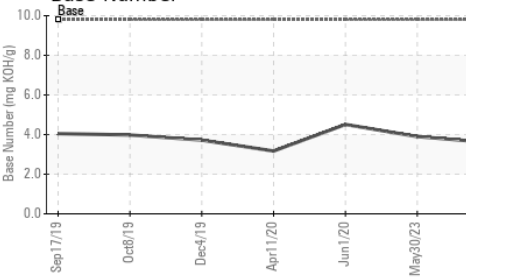
Fuel Dilution



Viscosity @ 100°C



Base Number

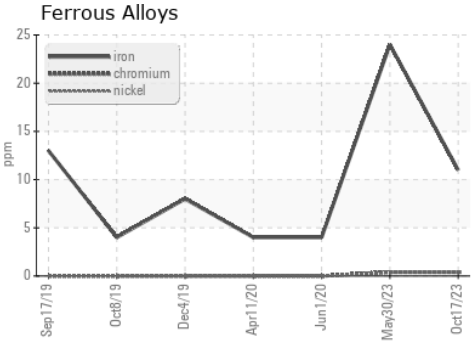


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	---
Silt	scalar	*Visual	NONE	**NONE**	NONE	---
Debris	scalar	*Visual	NONE	**NONE**	NONE	---
Sand/Dirt	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	---

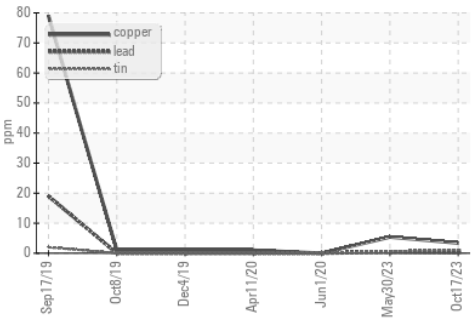
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **11.3**	▲ 11.1	13

GRAPHS

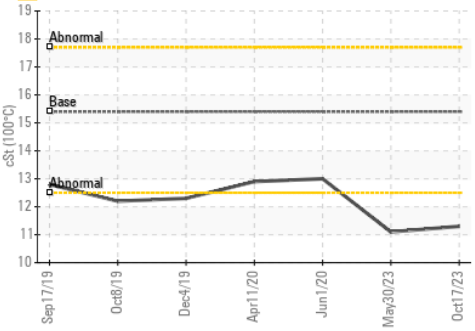
Ferrous Alloys



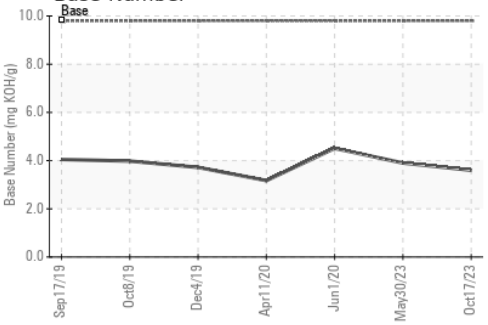
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0093300 **Received** : 23 Oct 2023
Lab Number : 05986031 **Diagnosed** : 24 Oct 2023
Unique Number : 10708693 **Diagnostician** : Wes Davis
Test Package : FLEET (Additional Tests: PercentFuel)

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)

GFL Environmental - 865 - East Mount Hauling
7213 East Mount Houston Road
Houston, TX
US 77050
Contact: Saul Castillo
saul.castillo@gflenv.com
T:
F:

Report Id: GFL865 [WUSCAR] 05986031 (Generated: 10/26/2023 07:57:56) Rev: 1

Submitted By: TECHNICIAN ACCOUNT