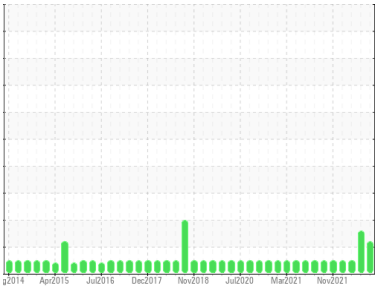
PROBLEM SUMMARY

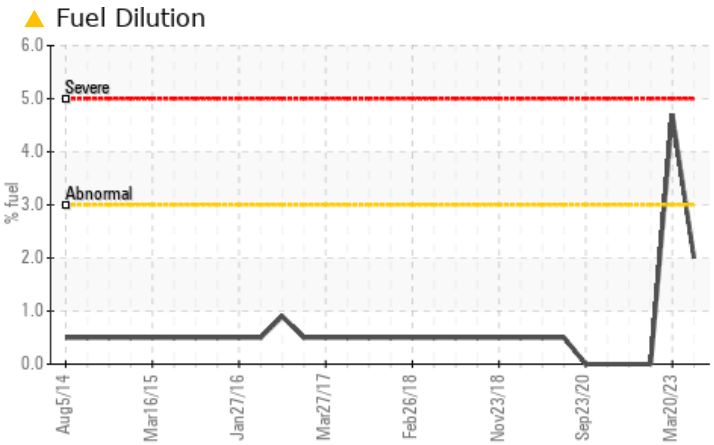
Machine Id
2296
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (60 QTS)

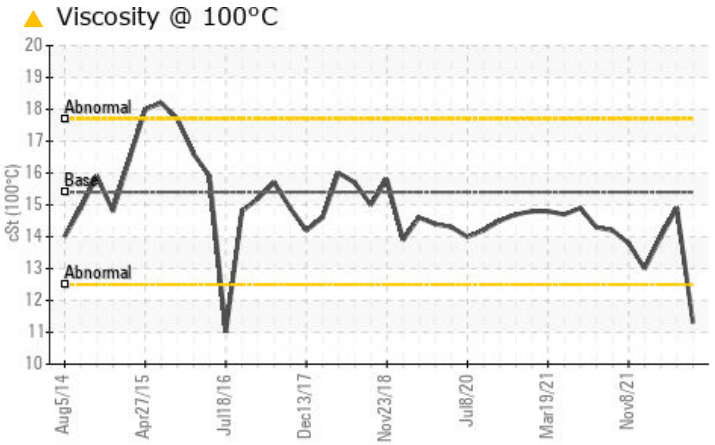
Sample Rating Trend



FUEL

COMPONENT CONDITION SUMMARY





RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				MARGINAL	ABNORMAL	NORMAL
Fuel	%	ASTM D3524	>3.0	▲ **2.0**	▲ 4.7	<1.0
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **11.3**	14.9	14.0

Customer Id: GFL030
Sample No.: GFL0047432
Lab Number: 05904173
Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:
Doug Bogart +1 (800)237-1369 x4016
dougb@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.

HISTORICAL DIAGNOSIS

20 Mar 2023 Diag: Doug Bogart

SOOT

We advise that you check for faulty combustion, plugged air filters, or aftercoolers. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. 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. Light fuel dilution occurring. The oil is no longer serviceable due to the presence of contaminants.

view report

24 Feb 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

22 Nov 2021 Diag: Doug Bogart

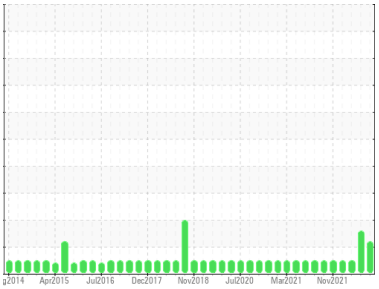
NORMAL

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



FUEL

Machine Id
2296
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (60 QTS)

DIAGNOSIS

Recommendation
Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
Light fuel dilution occurring. No other contaminants were detected in the oil.

Fluid Condition
The oil viscosity is lower than normal. 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		**GFL0047432**	GFL0070776	GFL0037763
Sample Date		Client Info		**10 Jul 2023**	20 Mar 2023	24 Feb 2022
Machine Age	hrs	Client Info		**1790999**	1790692	39069
Oil Age	hrs	Client Info		**600**	600	269
Oil Changed		Client Info		**Changed**	Changed	Not Changd
Sample Status				**MARGINAL**	ABNORMAL	NORMAL

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	**9**	72	3
Chromium	ppm	ASTM D5185m	>20	**<1**	2	<1
Nickel	ppm	ASTM D5185m	>5	**0**	0	<1
Titanium	ppm	ASTM D5185m	>2	**0**	0	0
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**<1**	4	2
Lead	ppm	ASTM D5185m	>40	**0**	13	<1
Copper	ppm	ASTM D5185m	>330	**1**	7	0
Tin	ppm	ASTM D5185m	>15	**0**	<1	<1
Antimony	ppm	ASTM D5185m		**---**	---	<1
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**150**	4	169
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	60	**17**	65	86
Manganese	ppm	ASTM D5185m	0	**0**	1	<1
Magnesium	ppm	ASTM D5185m	1010	**151**	1006	840
Calcium	ppm	ASTM D5185m	1070	**2043**	1161	1382
Phosphorus	ppm	ASTM D5185m	1150	**951**	1046	919
Zinc	ppm	ASTM D5185m	1270	**1157**	1287	1039
Sulfur	ppm	ASTM D5185m	2060	**4002**	3263	2700

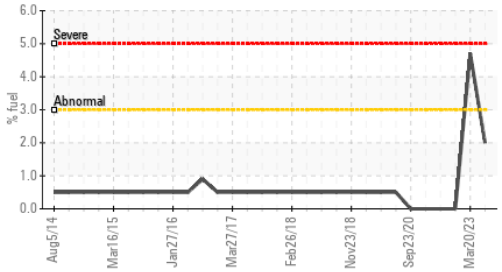
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**2**	7	5
Sodium	ppm	ASTM D5185m		**1**	4	1
Potassium	ppm	ASTM D5185m	>20	**4**	2	<1
Fuel	%	ASTM D3524	>3.0	▲ **2.0**	▲ 4.7	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>4	**0.5**	▲ 5.7	0.1
Nitration	Abs/cm	*ASTM D7624	>20	**5.9**	14.4	4.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	**19.3**	31.7	19.8

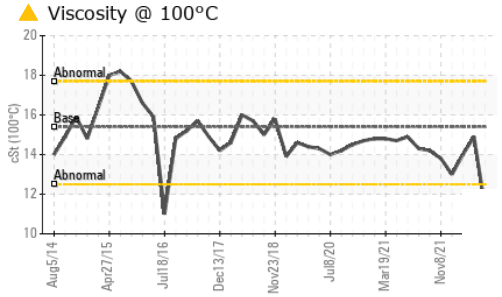
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**14.6**	19.2	13.8
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**8.2**	---	9.3

OIL ANALYSIS REPORT

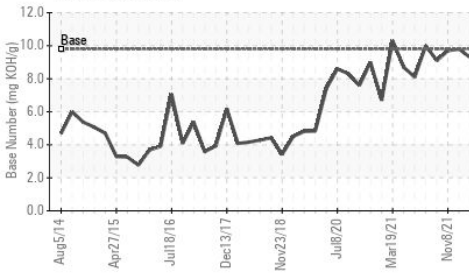
Fuel Dilution



Viscosity @ 100°C



Base Number

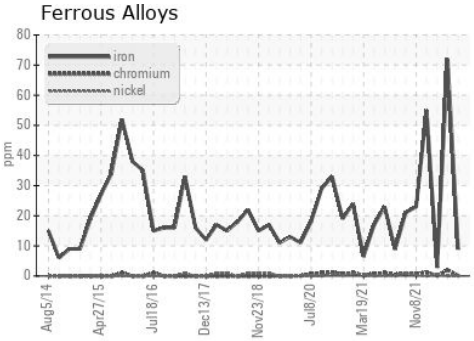


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

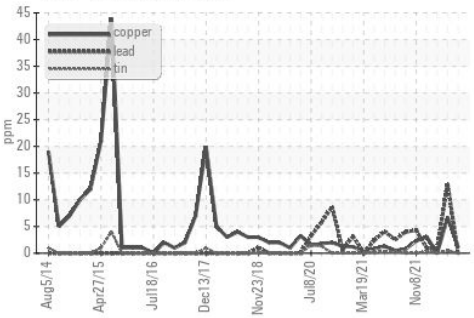
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **11.3**	14.9	14.0

GRAPHS

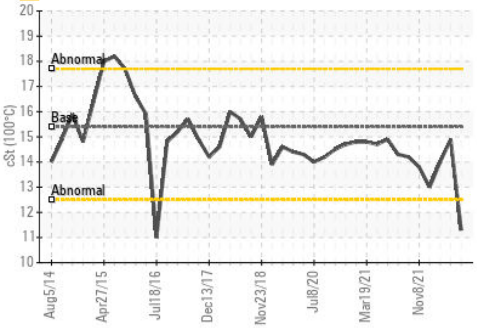
Ferrous Alloys



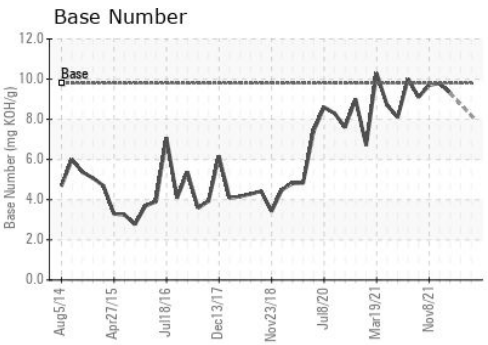
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0047432 **Received** : 21 Jul 2023
Lab Number : 05904173 **Diagnosed** : 01 Aug 2023
Unique Number : 10565529 **Diagnostician** : Doug Bogart
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 - 030 - Conway Myrtle Beach
3010 HWY 378
Conway, SC
US 29527
Contact: CHET STROSCHINE
cstroschine@gflenv.com
T:
F:

Report Id: GFL030 [WUSCAR] 05904173 (Generated: 08/03/2023 21:10:55) Rev: 1

Submitted By: CHET STROSCHINE