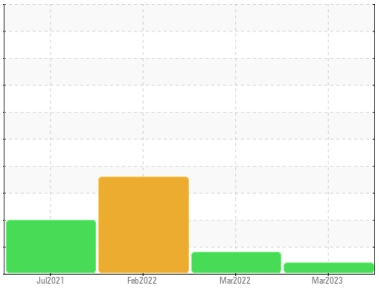
PROBLEM SUMMARY

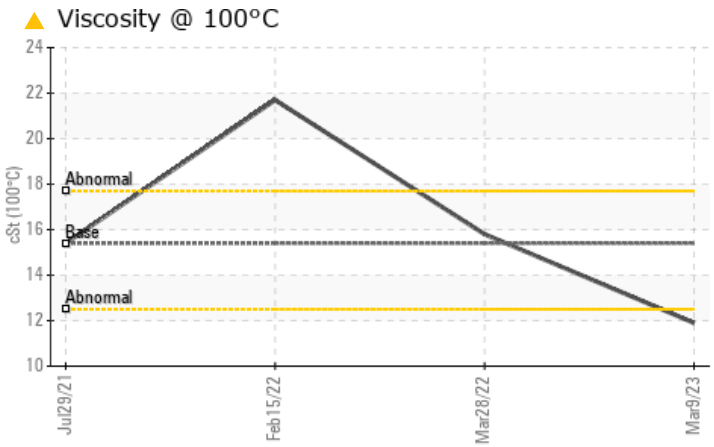
Machine Id
727065-361316.1
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

Sample Rating Trend



VISCOSITY

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				ATTENTION	ABNORMAL	SEVERE
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **11.9**	15.8	▲ 21.7

Customer Id: GFL829
Sample No.: GFL0065557
Lab Number: 05802213
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.

HISTORICAL DIAGNOSIS

28 Mar 2022 Diag: Jonathan Hester

SOOT

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.All component wear rates are normal. There is an abnormal amount of solids and carbon present in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

view report

15 Feb 2022 Diag: Don Baldridge

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. 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

29 Jul 2021 Diag: Don Baldridge

DEGRADATION

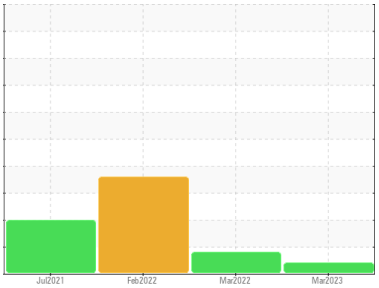
We advise that you check for faulty combustion, plugged air filters, or aftercoolers. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. NOTE: High solids (carbon/soot) in the sample have limited the accuracy of Infra-Red data including Total Base Number (TBN) value.All component wear rates are normal. There is an abnormal amount of solids and carbon present in the oil. The BN level is low.

view report

OIL ANALYSIS REPORT

Machine Id
727065-361316.1
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

Sample Rating Trend



VISCOSITY

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
Fuel content negligible. There is no indication of any contamination 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. Confirm oil type.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0065557**	GFL0036301	GFL0036393
Sample Date		Client Info		**09 Mar 2023**	28 Mar 2022	15 Feb 2022
Machine Age	hrs	Client Info		**0**	870	6284
Oil Age	hrs	Client Info		**0**	700	700
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**ATTENTION**	ABNORMAL	SEVERE

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	**7**	9	20
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>5	**0**	<1	<1
Titanium	ppm	ASTM D5185m	>2	**0**	0	<1
Silver	ppm	ASTM D5185m	>2	**0**	0	<1
Aluminum	ppm	ASTM D5185m	>20	**2**	2	3
Lead	ppm	ASTM D5185m	>40	**<1**	1	2
Copper	ppm	ASTM D5185m	>330	**28**	2	6
Tin	ppm	ASTM D5185m	>15	**<1**	<1	2
Antimony	ppm	ASTM D5185m		**---**	---	---
Vanadium	ppm	ASTM D5185m		**<1**	0	<1
Cadmium	ppm	ASTM D5185m		**<1**	0	0

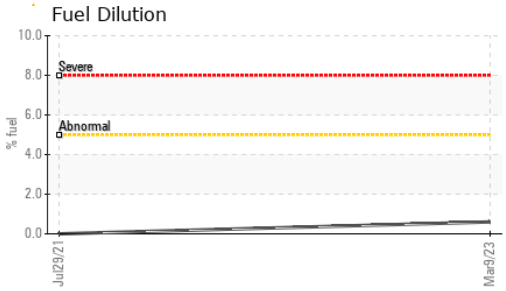
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**137**	2	2
Barium	ppm	ASTM D5185m	0	**2**	0	0
Molybdenum	ppm	ASTM D5185m	60	**61**	53	59
Manganese	ppm	ASTM D5185m	0	**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	1010	**408**	935	1059
Calcium	ppm	ASTM D5185m	1070	**1654**	1090	1215
Phosphorus	ppm	ASTM D5185m	1150	**1017**	989	1118
Zinc	ppm	ASTM D5185m	1270	**1183**	1198	1297
Sulfur	ppm	ASTM D5185m	2060	**3321**	2564	2684

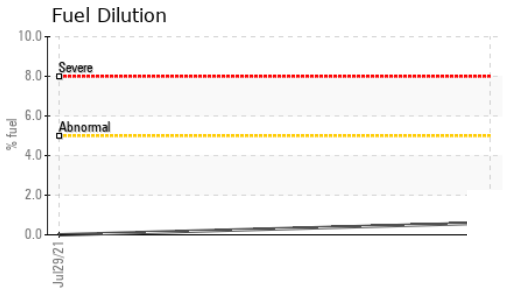
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**6**	2	5
Sodium	ppm	ASTM D5185m		**3**	<1	0
Potassium	ppm	ASTM D5185m	>20	**1**	0	1
Fuel	%	ASTM D3524	>5	**0.6**	<1.0	<1.0

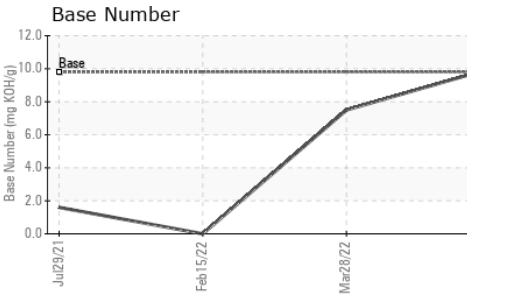
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>4	**1.4**	▲ 4.6	⬢ 8.7
Nitration	Abs/cm	*ASTM D7624	>20	**5.5**	10.1	31.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	**20.6**	26.4	55.8

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**13.4**	14.6	63.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**10.0**	7.5	▲ 0.0

OIL ANALYSIS REPORT



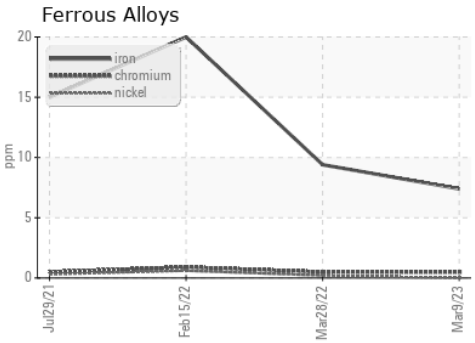


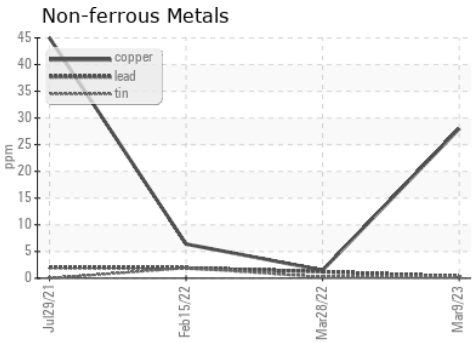


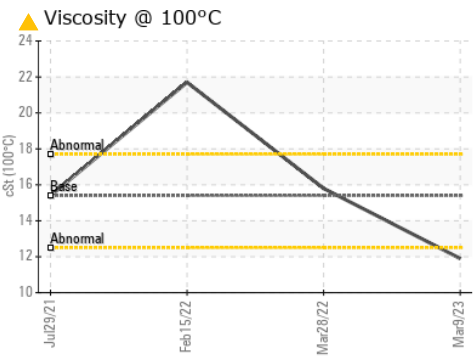
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

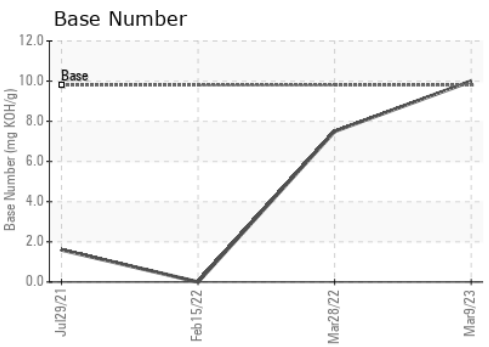
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **11.9**	15.8	▲ 21.7

GRAPHS









Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0065557
Lab Number : 05802213
Unique Number : 10399742
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)
Received : 27 Mar 2023
Diagnosed : 30 Mar 2023
Diagnostician : Jonathan Hester

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 - 829 - Wilco Hauling
5054 Highway HH
Hartville, MO
US 65667
Contact: James Jones
james.jones@gflenv.com
T: (417)349-5006
F:

Report Id: GFL829 [WUSCAR] 05802213 (Generated: 10/03/2023 09:43:33) Rev: 1

Submitted By: Dennis Moore