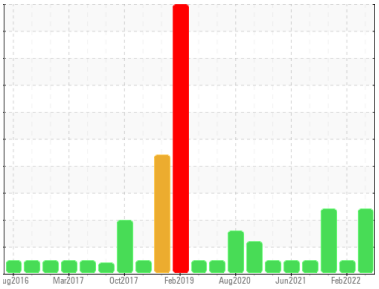
PROBLEM SUMMARY

Sample Rating Trend

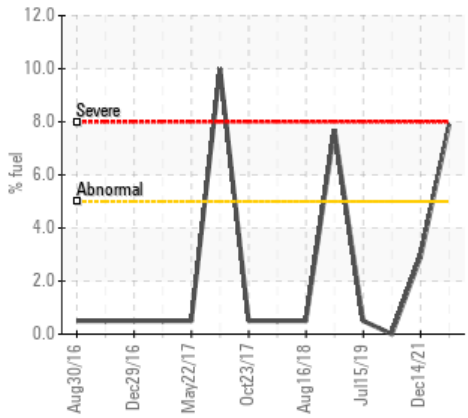


GLYCOL

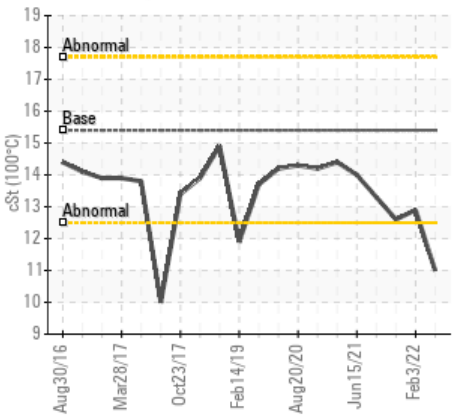
Machine Id
10663
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY

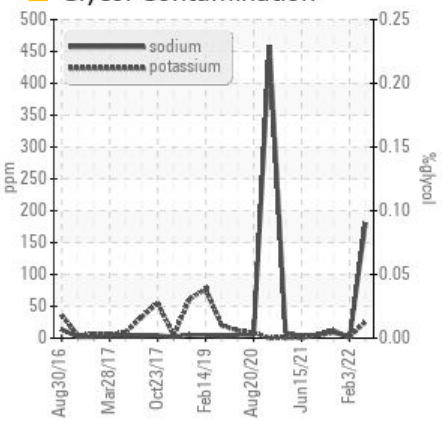
▲ Fuel Dilution



▲ Viscosity @ 100°C



▲ Glycol Contamination



RECOMMENDATION

Check for low coolant level. 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.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	NORMAL	ABNORMAL
Sodium	ppm	ASTM D5185m		▲ **181**	<1	12
Fuel	%	ASTM D3524	>5	▲ **7.9**	<1.0	▲ 2.9
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **11.0**	12.9	12.6

Customer Id: GFL034
Sample No.: GFL0071019
Lab Number: 05884913
Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:
Angela Borella +1 800-237-1369
angela.borella@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	---	---	?	We recommend that you drain the oil from the component if this has not already been done.
Resample	---	---	?	We recommend an early resample to monitor this condition.

HISTORICAL DIAGNOSIS

03 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

14 Dec 2021 Diag: Jonathan Hester

WEAR

We recommend you service the filters on this component. Resample at the next service interval to monitor.Cylinder, crank, or cam shaft wear is indicated. There is an abnormal amount of solids and carbon present in the oil. Light fuel dilution occurring. 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

24 Sep 2021 Diag: Wes Davis

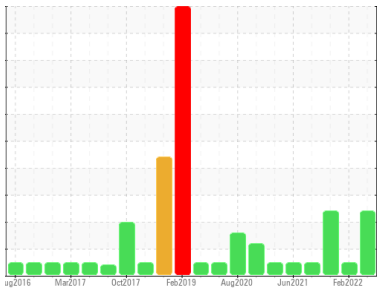
NORMAL

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.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



GLYCOL

Machine Id
10663
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Check for low coolant level. 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.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of fuel present in the oil. Water treatment chemicals present, indicating slow coolant leak. Tests confirm the presence of fuel in the oil. Test for glycol is negative.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history 1	history 2
Sample Number		Client Info		**GFL0071019**	GFL0042248	GFL0034282
Sample Date		Client Info		**21 Jun 2023**	03 Feb 2022	14 Dec 2021
Machine Age	hrs	Client Info		**21295**	21295	12605
Oil Age	hrs	Client Info		**21295**	21295	21295
Oil Changed		Client Info		**Not Changd**	Not Changd	Not Changd
Sample Status				**ABNORMAL**	NORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>110	**52**	34	▲ 128
Chromium	ppm	ASTM D5185m	>4	**2**	1	4
Nickel	ppm	ASTM D5185m	>2	**<1**	0	<1
Titanium	ppm	ASTM D5185m		**<1**	4	15
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**22**	8	19
Lead	ppm	ASTM D5185m	>45	**0**	0	<1
Copper	ppm	ASTM D5185m	>85	**1**	<1	3
Tin	ppm	ASTM D5185m	>4	**<1**	<1	<1
Antimony	ppm	ASTM D5185m		**---**	0	0
Vanadium	ppm	ASTM D5185m		**0**	<1	<1
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m	0	**6**	17	8
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	60	**53**	56	49
Manganese	ppm	ASTM D5185m	0	**<1**	<1	1
Magnesium	ppm	ASTM D5185m	1010	**728**	832	661
Calcium	ppm	ASTM D5185m	1070	**875**	1188	1167
Phosphorus	ppm	ASTM D5185m	1150	**815**	991	856
Zinc	ppm	ASTM D5185m	1270	**1049**	1019	1041
Sulfur	ppm	ASTM D5185m	2060	**2809**	2424	2134

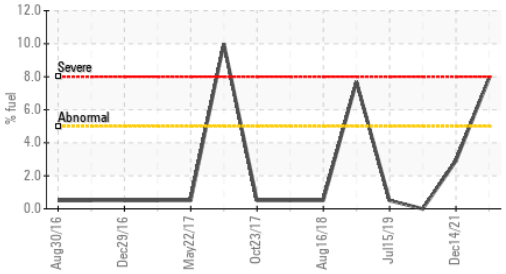
CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m	>30	**7**	8	15
Sodium	ppm	ASTM D5185m		▲ **181**	<1	12
Potassium	ppm	ASTM D5185m	>20	**26**	2	9
Fuel	%	ASTM D3524	>5	▲ **7.9**	<1.0	▲ 2.9
Glycol	%	*ASTM D2982		**NEG**	NEG	NEG

INFRA-RED		method	limit/base	current	history 1	history 2
Soot %	%	*ASTM D7844	>3	**1.3**	0.9	▲ 3.6
Nitration	Abs/cm	*ASTM D7624	>20	**13.3**	9.8	17.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	**23.5**	20.5	33.2

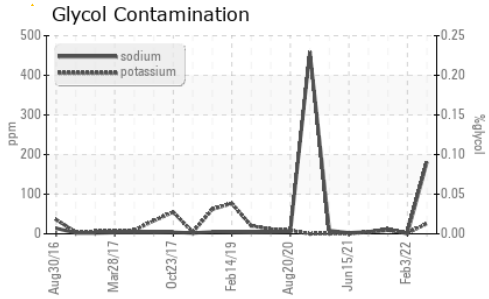
FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**21.9**	16.1	28.3
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**6.0**	8.2	4.2

OIL ANALYSIS REPORT

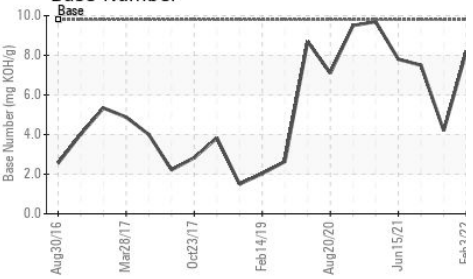
▲ Fuel Dilution



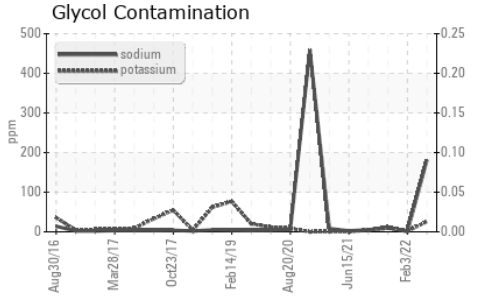
Glycol Contamination



Base Number



Glycol Contamination

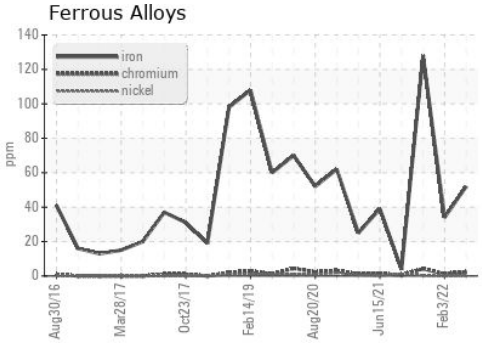


VISUAL		method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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

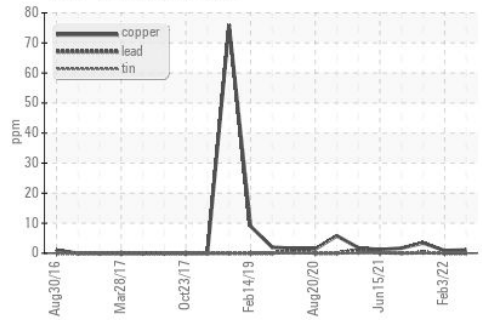
FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **11.0**	12.9	12.6

GRAPHS

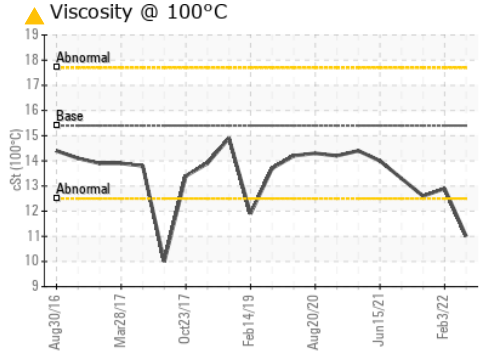
Ferrous Alloys



Non-ferrous Metals



▲ Viscosity @ 100°C



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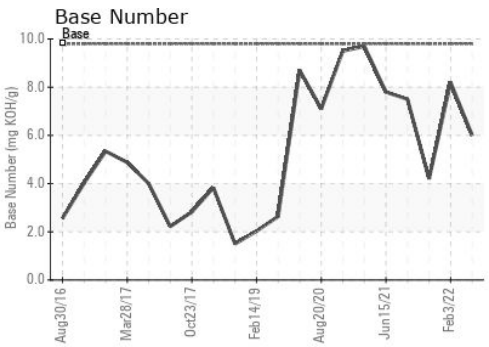

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0071019 **Received** : 27 Jun 2023
Lab Number : 05884913 **Diagnosed** : 30 Jun 2023
Unique Number : 10535396 **Diagnostician** : Angela Borella
Test Package : FLEET (Additional Tests: FuelDilution, Glycol, 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 - 034 - Delaware South
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Millsboro, DE
US 19966
Contact: Brian Houston
gary.houston@gflenv.com
T:
F:

Report Id: GFL034 [WUSCAR] 05884913 (Generated: 06/30/2023 17:51:17) Rev: 1

Submitted By: TECHNICIAN ACCOUNT