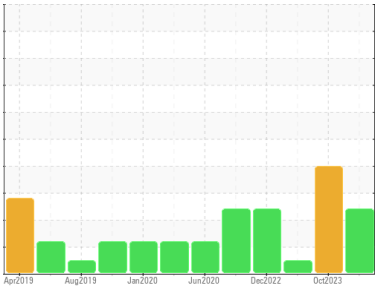
PROBLEM SUMMARY

Sample Rating Trend

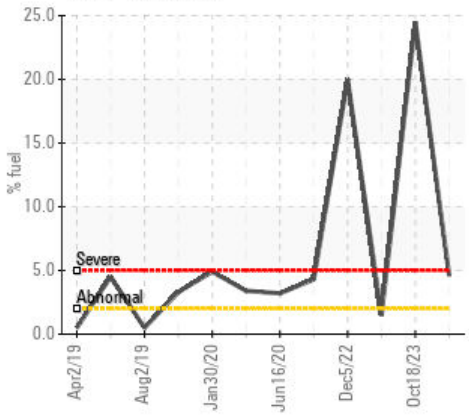


GLYCOL

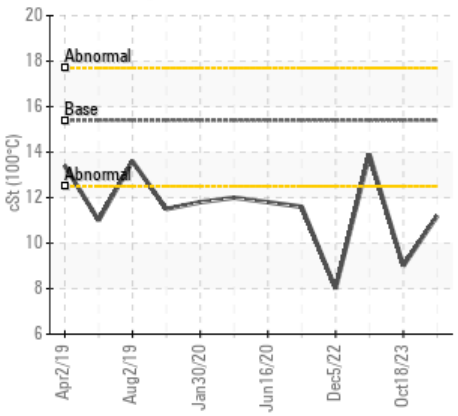
Machine Id
721020-361648
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY

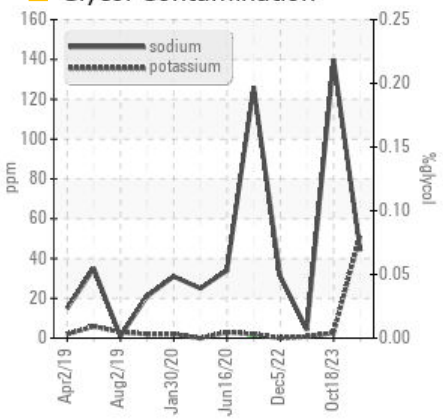
▲ Fuel Dilution



▲ Viscosity @ 100°C



▲ Glycol Contamination



RECOMMENDATION

We advise that you check the fuel injection system.
Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	SEVERE	NORMAL
Potassium	ppm	ASTM D5185m	>20	▲ **52**	3	<1
Fuel	%	ASTM D3524	>2.0	▲ **4.6**	⬢ 24.5	1.5
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **11.2**	⬢ 9	13.9

Customer Id: GFL823
Sample No.: GFL0099954
Lab Number: 06015624
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
Check Fuel/injector System	---	---	?	We advise that you check the fuel injection system.

HISTORICAL DIAGNOSIS

18 Oct 2023 Diag: Jonathan Hester

FUEL

We advise that you check the fuel injection system. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.All component wear rates are normal. Sodium and/or potassium levels are high. There is a high amount of fuel present in the oil. Fuel is present in the oil and is lowering the viscosity. 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.

view report

15 Sep 2023 Diag: Wes Davis

NORMAL

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.All component wear rates are normal. Light fuel dilution occurring. No other contaminants were detected 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

05 Dec 2022 Diag: Don Baldridge

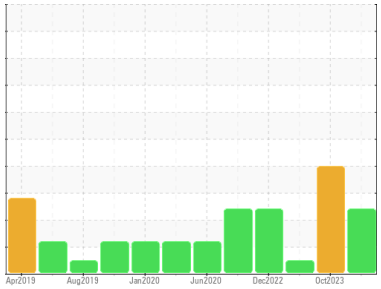
FUEL

We advise that you check the fuel injection system. We recommend that you drain the oil and perform a filter service on this component if not already done. 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 result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL

Machine Id
721020-361648
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation
We advise that you check the fuel injection system. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
Sodium and/or potassium levels are high. There is a moderate amount of fuel present in the oil. Test for glycol is negative.

Fluid Condition
Fuel is present in the oil and is lowering the viscosity. 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		**GFL0099954**	GFL0095130	GFL0087705
Sample Date		Client Info		**15 Nov 2023**	18 Oct 2023	15 Sep 2023
Machine Age	hrs	Client Info		**2835**	28196	28023
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**Not Changd**	Not Changd	Changed
Sample Status				**ABNORMAL**	SEVERE	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	**21**	4	6
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>4	**0**	0	0
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m	>3	**<1**	0	0
Aluminum	ppm	ASTM D5185m	>20	**3**	2	0
Lead	ppm	ASTM D5185m	>40	**1**	0	0
Copper	ppm	ASTM D5185m	>330	**1**	3	<1
Tin	ppm	ASTM D5185m	>15	**<1**	0	0
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	**3**	0	4
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	60	**60**	51	57
Manganese	ppm	ASTM D5185m	0	**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	1010	**929**	741	946
Calcium	ppm	ASTM D5185m	1070	**1045**	772	1080
Phosphorus	ppm	ASTM D5185m	1150	**1019**	805	1035
Zinc	ppm	ASTM D5185m	1270	**1238**	973	1245
Sulfur	ppm	ASTM D5185m	2060	**2947**	2409	3729

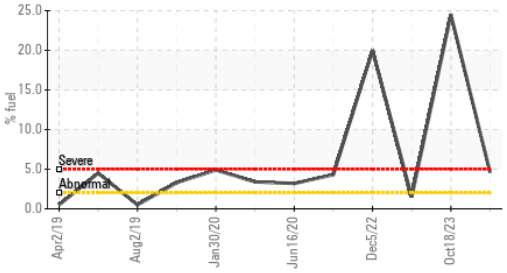
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**10**	7	6
Sodium	ppm	ASTM D5185m		**44**	▲ 140	4
Potassium	ppm	ASTM D5185m	>20	▲ **52**	3	<1
Fuel	%	ASTM D3524	>2.0	▲ **4.6**	⬢ 24.5	1.5
Glycol	%	*ASTM D2982		**NEG**	NEG	NEG

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.2**	0.4	0.5
Nitration	Abs/cm	*ASTM D7624	>20	**7.5**	8.3	6.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	**20.1**	20.8	18.2

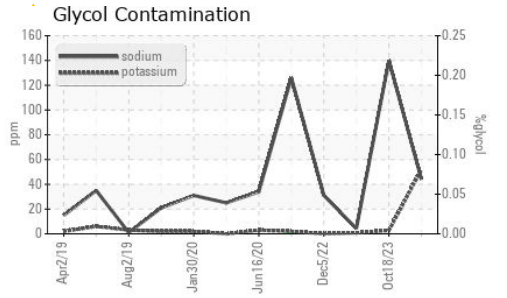
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**16.5**	20.2	13.0
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**7.5**	7.2	9.4

OIL ANALYSIS REPORT

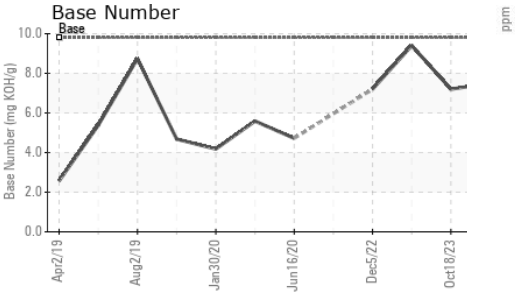
Fuel Dilution



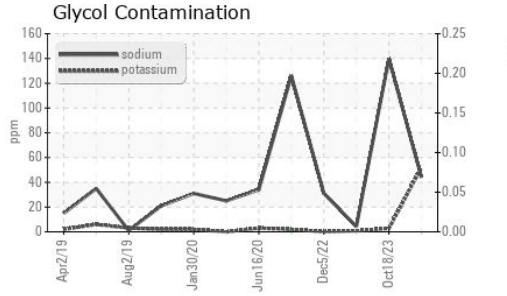
Glycol Contamination



Base Number



Glycol Contamination

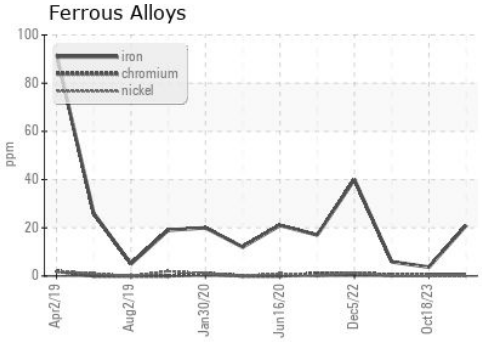


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

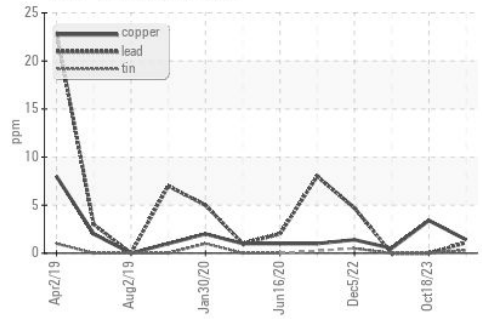
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **11.2**	⬢ 9	13.9

GRAPHS

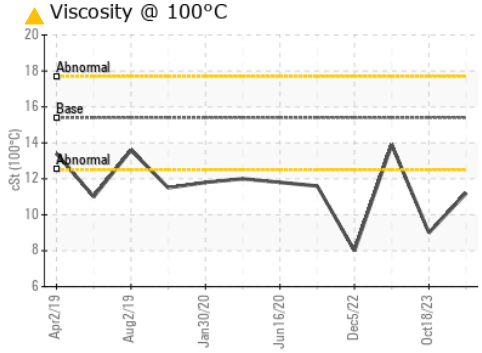
Ferrous Alloys



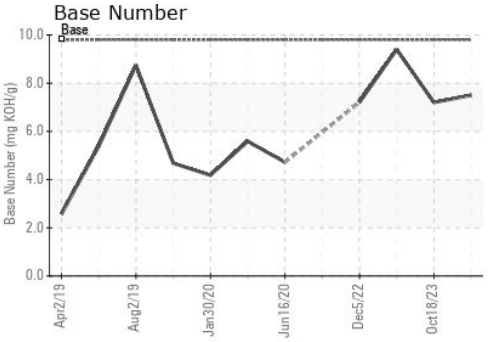
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0099954 **Received** : 22 Nov 2023
Lab Number : 06015624 **Diagnosed** : 30 Nov 2023
Unique Number : 10754768 **Diagnostician** : Jonathan Hester
Test Package : FLEET (Additional Tests: 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 - 823 - Central Missouri Hauling
24461 Oak Grove Lane
Sedalia, MO
US 65301
Contact: Terry Randolph
trandolph@gflenv.com
T: (660)631-2116
F: