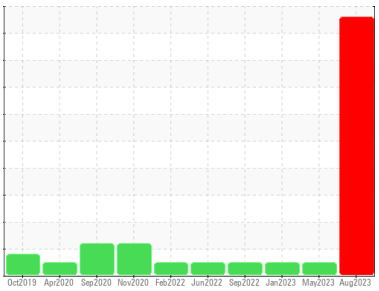
PROBLEM SUMMARY

Sample Rating Trend

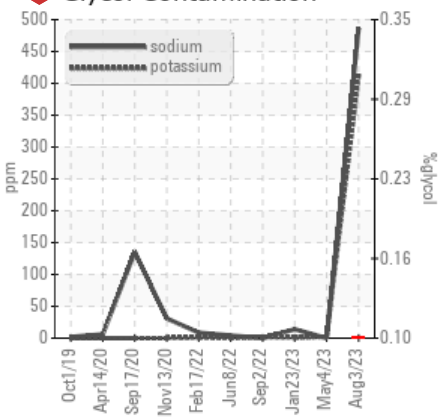


GLYCOL

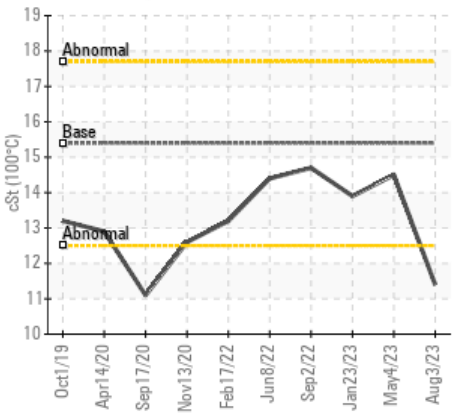
Machine Id
928063-205248
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY

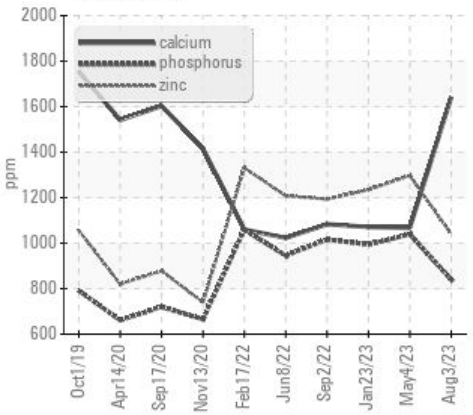
Glycol Contamination



Viscosity @ 100°C



Additives



RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	NORMAL	NORMAL
Magnesium	ppm	ASTM D5185m	1010	▲ **597**	983	928
Calcium	ppm	ASTM D5185m	1070	▲ **1641**	1068	1071
Sodium	ppm	ASTM D5185m		▲ **486**	0	14
Potassium	ppm	ASTM D5185m	>20	▲ **412**	2	1
Glycol	%	*ASTM D2982		⬢ **0.10**	NEG	NEG
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **11.4**	14.5	13.9

Customer Id: GFL859
Sample No.: GFL0087910
Lab Number: 05918397
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.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Glycol Access	---	---	?	We advise that you check for the source of the coolant leak.

HISTORICAL DIAGNOSIS

04 May 2023 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

23 Jan 2023 Diag: Wes Davis

NORMAL

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.Metal levels are typical for a new component breaking in. 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

02 Sep 2022 Diag: Wes Davis

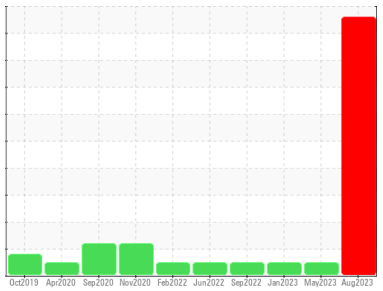
NORMAL

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with 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
928063-205248
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter 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

Sodium and/or potassium levels are high. Test for glycol is positive. Fuel content negligible.

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		**GFL0087910**	GFL0056962	GFL0056948
Sample Date		Client Info		**03 Aug 2023**	04 May 2023	23 Jan 2023
Machine Age	hrs	Client Info		**15821**	0	14382
Oil Age	hrs	Client Info		**100**	600	600
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**SEVERE**	NORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	**10**	1	12
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	**4**	0	2
Lead	ppm	ASTM D5185m	>40	**0**	0	0
Copper	ppm	ASTM D5185m	>330	**1**	<1	1
Tin	ppm	ASTM D5185m	>15	**<1**	0	<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	**18**	4	1
Barium	ppm	ASTM D5185m	0	**0**	0	<1
Molybdenum	ppm	ASTM D5185m	60	**83**	57	61
Manganese	ppm	ASTM D5185m	0	**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	1010	▲ **597**	983	928
Calcium	ppm	ASTM D5185m	1070	▲ **1641**	1068	1071
Phosphorus	ppm	ASTM D5185m	1150	**840**	1039	994
Zinc	ppm	ASTM D5185m	1270	**1040**	1297	1235
Sulfur	ppm	ASTM D5185m	2060	**3354**	3753	3505

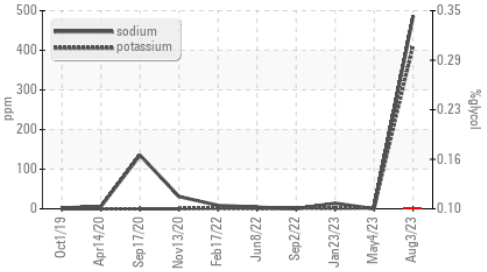
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**12**	5	4
Sodium	ppm	ASTM D5185m		▲ **486**	0	14
Potassium	ppm	ASTM D5185m	>20	▲ **412**	2	1
Fuel	%	ASTM D3524	>5	**0.9**	<1.0	<1.0
Glycol	%	*ASTM D2982		⬢ **0.10**	NEG	NEG

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.1**	0.2	0.5
Nitration	Abs/cm	*ASTM D7624	>20	**7.1**	5.4	9.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	**21.3**	16.4	19.8

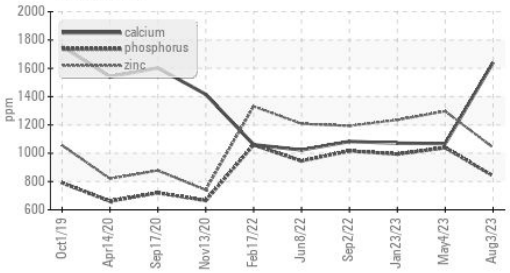
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**19.4**	12.9	15.9
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**14.6**	8.1	8.8

OIL ANALYSIS REPORT

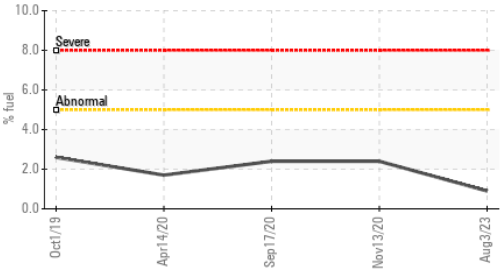
Glycol Contamination



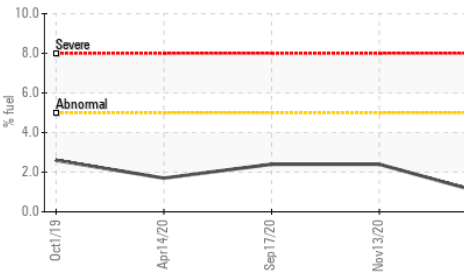
Additives



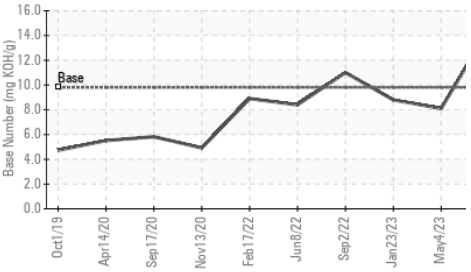
Fuel Dilution



Fuel Dilution



Base Number

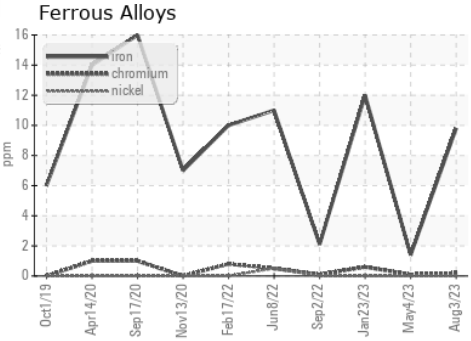


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

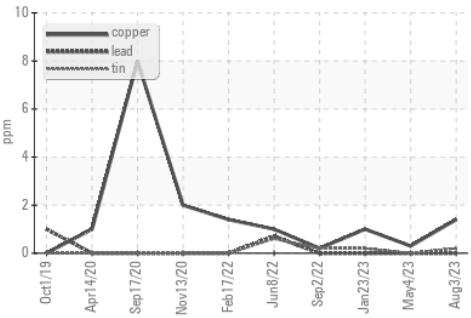
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **11.4**	14.5	13.9

GRAPHS

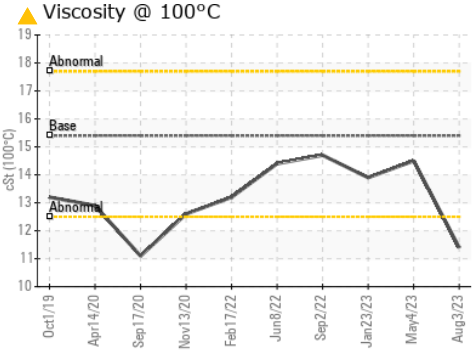
Ferrous Alloys



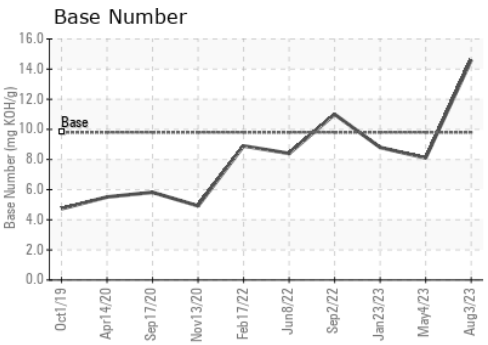
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0087910 **Received** : 08 Aug 2023
Lab Number : 05918397 **Diagnosed** : 09 Aug 2023
Unique Number : 10590311 **Diagnostician** : Jonathan Hester
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 - 859 - Bay City
700 Avenue F
Bay City, TX
US 77414
Contact: JONATHON BROWN
jonathon.brown@gflenv.com
T:
F:

Report Id: GFL859 [WUSCAR] 05918397 (Generated: 08/09/2023 14:22:08) Rev: 1

Submitted By: JONATHON BROWN