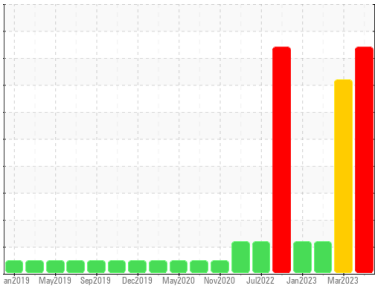
PROBLEM SUMMARY

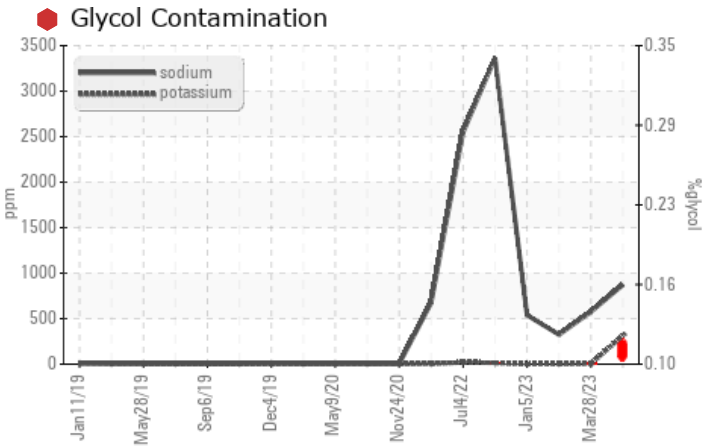
Sample Rating Trend



GLYCOL

Machine Id
726043-361607
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY



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	SEVERE	ATTENTION
Sodium	ppm	ASTM D5185m		▲ **872**	▲ 576	▲ 324
Potassium	ppm	ASTM D5185m	>20	▲ **316**	5	2
Glycol	%	*ASTM D2982		⬢ **0.12**	⬢ 0.10	NEG

Customer Id: GFL865
Sample No.: GFL0083407
Lab Number: 05885373
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

28 Mar 2023 Diag: Doug Bogart

GLYCOL

We advise that you check possible 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.All component wear rates are normal. Sodium and/or potassium levels are high. Test for glycol is negative. The BN result indicates that there is suitable alkalinity remaining in the oil.

view report

24 Jan 2023 Diag: Jonathan Hester

GLYCOL

No corrective action is recommended at this time. We recommend an early resample to monitor this condition.All component wear rates are normal. Sodium and/or potassium levels remain high. 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 Jan 2023 Diag: Jonathan Hester

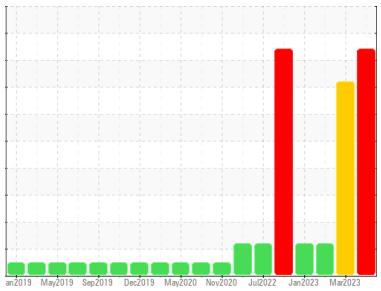
GLYCOL

We advise that you check for possible 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.All component wear rates are normal. Sodium and/or potassium levels remain high. The BN result indicates that there is suitable alkalinity remaining in the oil.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL

Machine Id
726043-361607
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.

Fluid Condition
The BN result indicates that there is suitable alkalinity remaining in the oil.

SAMPLE INFORMATION		method	limit/base	current	history 1	history 2
Sample Number		Client Info		**GFL0083407**	GFL0074184	GFL0065229
Sample Date		Client Info		**13 Jun 2023**	28 Mar 2023	24 Jan 2023
Machine Age	hrs	Client Info		**18726**	18139	218262
Oil Age	hrs	Client Info		**18726**	0	0
Oil Changed		Client Info		**Changed**	Changed	N/A
Sample Status				**SEVERE**	SEVERE	ATTENTION

CONTAMINATION		method	limit/base	current	history 1	history 2
Fuel		WC Method	>5	**<1.0**	<1.0	<1.0

WEAR METALS		method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>110	**22**	18	8
Chromium	ppm	ASTM D5185m	>4	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>2	**<1**	0	0
Titanium	ppm	ASTM D5185m		**<1**	0	0
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**0**	2	0
Lead	ppm	ASTM D5185m	>45	**3**	1	<1
Copper	ppm	ASTM D5185m	>85	**2**	2	1
Tin	ppm	ASTM D5185m	>4	**<1**	<1	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**<1**	0	0

ADDITIVES		method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m	0	**0**	0	0
Barium	ppm	ASTM D5185m	0	**1**	0	<1
Molybdenum	ppm	ASTM D5185m	60	**131**	85	66
Manganese	ppm	ASTM D5185m	0	**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	1010	**962**	989	867
Calcium	ppm	ASTM D5185m	1070	**1075**	1185	987
Phosphorus	ppm	ASTM D5185m	1150	**997**	1135	942
Zinc	ppm	ASTM D5185m	1270	**1247**	1315	1118
Sulfur	ppm	ASTM D5185m	2060	**3573**	3023	2872

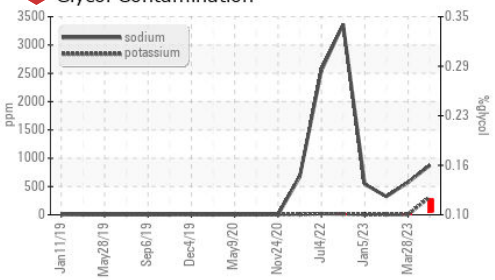
CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m	>30	**6**	6	3
Sodium	ppm	ASTM D5185m		▲ **872**	▲ 576	▲ 324
Potassium	ppm	ASTM D5185m	>20	▲ **316**	5	2
Glycol	%	*ASTM D2982		⬢ **0.12**	⬢ 0.10	NEG

INFRA-RED		method	limit/base	current	history 1	history 2
Soot %	%	*ASTM D7844	>3	**1.1**	1	0.5
Nitration	Abs/cm	*ASTM D7624	>20	**10.6**	9.3	7.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	**22.1**	21.5	19.1

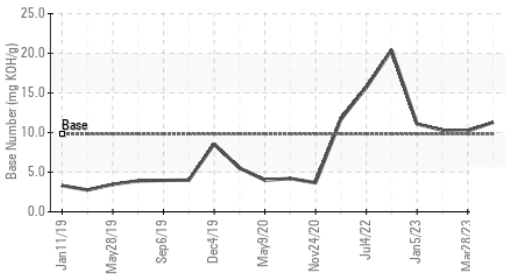
FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**16.4**	15.9	14.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**11.3**	10.2	10.3

OIL ANALYSIS REPORT

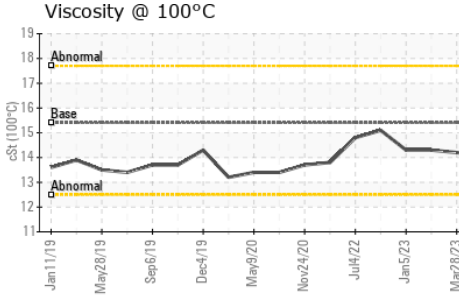
Glycol Contamination



Base Number



Viscosity @ 100°C

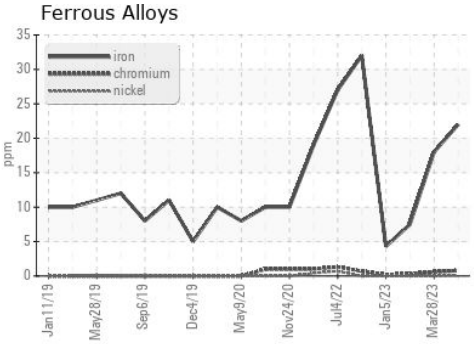


VISUAL		method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

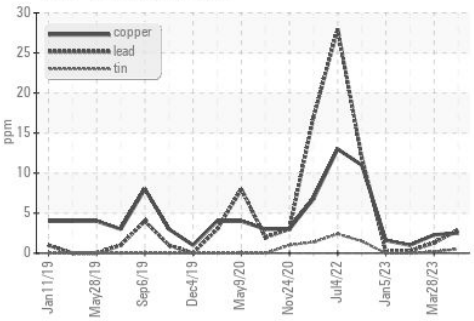
FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D445	15.4	**14.1**	14.2	14.3

GRAPHS

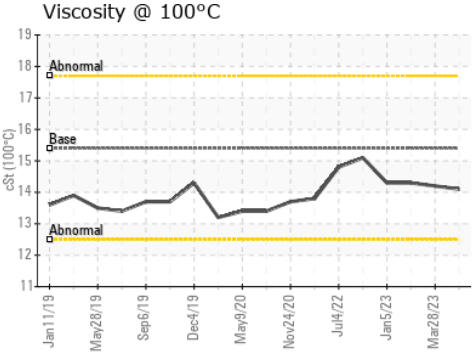
Ferrous Alloys



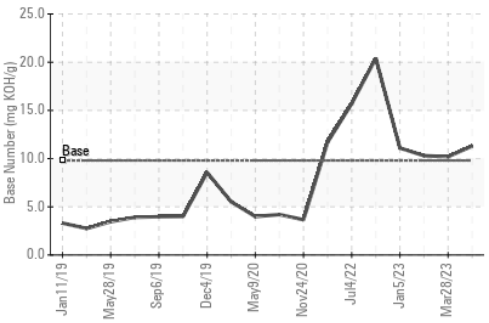
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0083407
Lab Number : 05885373
Unique Number : 10535856
Test Package : FLEET

Received : 28 Jun 2023
Diagnosed : 03 Jul 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 - 865 - East Mount Hauling
7213 East Mount Houston Road
Houston, TX
US 77050
Contact: Saul Castillo
saul.castillo@gflenv.com
T:
F:

Report Id: GFL865 [WUSCAR] 05885373 (Generated: 07/03/2023 09:48:06) Rev: 1

Submitted By: TECHNICIAN ACCOUNT