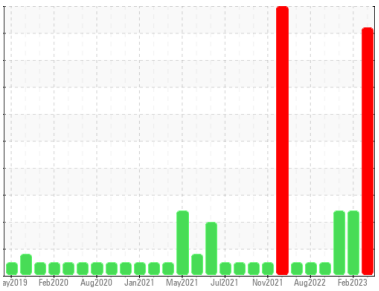
PROBLEM SUMMARY

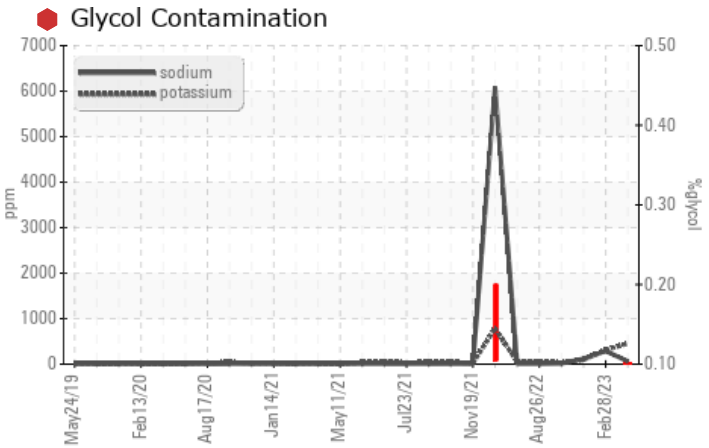
Sample Rating Trend



GLYCOL

Machine Id
12010
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (8 GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you check for the source of the coolant leak. The oil change at the time of sampling has been noted. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	ABNORMAL	ABNORMAL
Boron	ppm	ASTM D5185m	0	▲ **219**	19	37
Magnesium	ppm	ASTM D5185m	1010	▲ **586**	716	727
Sodium	ppm	ASTM D5185m		▲ **60**	▲ 290	▲ 121
Potassium	ppm	ASTM D5185m	>20	▲ **455**	▲ 309	▲ 96
Glycol	%	*ASTM D2982		⬢ **0.10**	NEG	NEG

Customer Id: GFL018
Sample No.: GFL0066840
Lab Number: 05891143
Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:
Wes Davis +1 905-569-8600 x223
wesd@wearcheck.ca

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Fluid Source	---	---	?	Confirm the source of the lubricant being utilized for top-up/fill.
Check Glycol Access	---	---	?	We advise that you check for the source of the coolant leak.

HISTORICAL DIAGNOSIS

28 Feb 2023 Diag: Jonathan Hester

GLYCOL

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.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

03 Jan 2023 Diag: Jonathan Hester

GLYCOL

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.All component wear rates are normal. Sodium and/or potassium levels are high. The BN result indicates that there is suitable alkalinity remaining in the oil.

view report

15 Nov 2022 Diag: Angela Borella

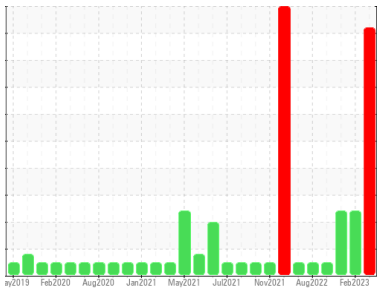
NORMAL

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

OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL

Machine Id
12010
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (8 GAL)

DIAGNOSIS

Recommendation

We advise that you check for the source of the coolant leak. The oil change at the time of sampling has been noted. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

Test for glycol is positive. There is a high concentration of glycol present in the oil.

Fluid Condition

Additive levels indicate the addition of a different brand, or type of oil. 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.

SAMPLE INFORMATION		method	limit/base	current	history 1	history 2
Sample Number		Client Info		**GFL0066840**	GFL0055903	GFL0066784
Sample Date		Client Info		**04 Jul 2023**	28 Feb 2023	03 Jan 2023
Machine Age	hrs	Client Info		**8078**	8078	8078
Oil Age	hrs	Client Info		**8078**	8078	8078
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**SEVERE**	ABNORMAL	ABNORMAL

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	>100	**21**	15	6
Chromium	ppm	ASTM D5185m	>20	**1**	<1	0
Nickel	ppm	ASTM D5185m	>4	**0**	0	0
Titanium	ppm	ASTM D5185m		**<1**	<1	0
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**3**	7	4
Lead	ppm	ASTM D5185m	>40	**<1**	0	0
Copper	ppm	ASTM D5185m	>330	**6**	<1	0
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	history 1	history 2
Boron	ppm	ASTM D5185m	0	▲ **219**	19	37
Barium	ppm	ASTM D5185m	0	**3**	0	0
Molybdenum	ppm	ASTM D5185m	60	**77**	67	62
Manganese	ppm	ASTM D5185m	0	**2**	<1	0
Magnesium	ppm	ASTM D5185m	1010	▲ **586**	716	727
Calcium	ppm	ASTM D5185m	1070	**1400**	1224	1293
Phosphorus	ppm	ASTM D5185m	1150	**1072**	933	910
Zinc	ppm	ASTM D5185m	1270	**1316**	1057	1104
Sulfur	ppm	ASTM D5185m	2060	**4086**	2794	3505

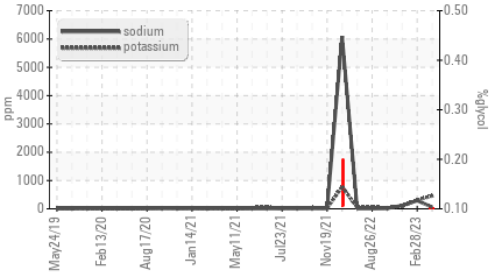
CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m	>25	**8**	9	6
Sodium	ppm	ASTM D5185m		▲ **60**	▲ 290	▲ 121
Potassium	ppm	ASTM D5185m	>20	▲ **455**	▲ 309	▲ 96
Glycol	%	*ASTM D2982		⬢ **0.10**	NEG	NEG

INFRA-RED		method	limit/base	current	history 1	history 2
Soot %	%	*ASTM D7844	>3	**0.3**	0.3	0.1
Nitration	Abs/cm	*ASTM D7624	>20	**6.6**	7.8	5.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	**20.6**	18.0	17.1

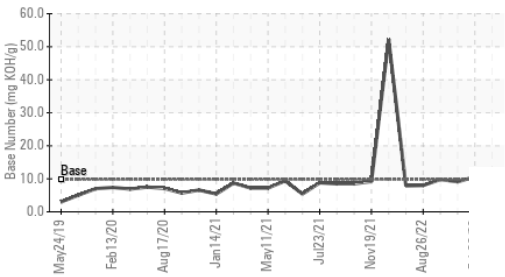
FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**14.7**	13.0	12.3
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**9.2**	10.6	9.1

OIL ANALYSIS REPORT

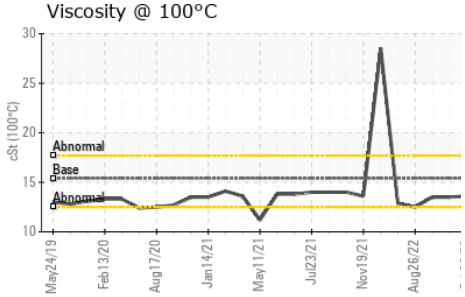
Glycol Contamination



Base Number



Viscosity @ 100°C

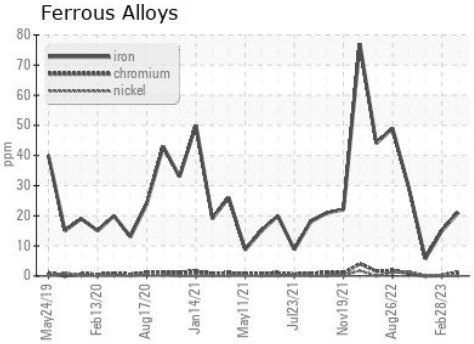


VISUAL		method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

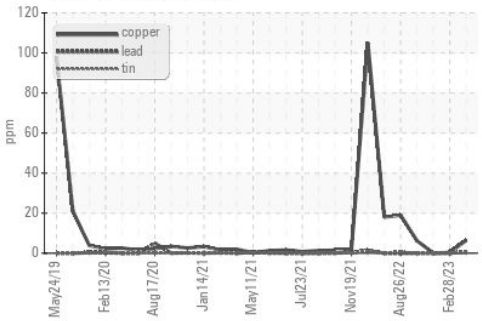
FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D445	15.4	**13.3**	13.6	13.5

GRAPHS

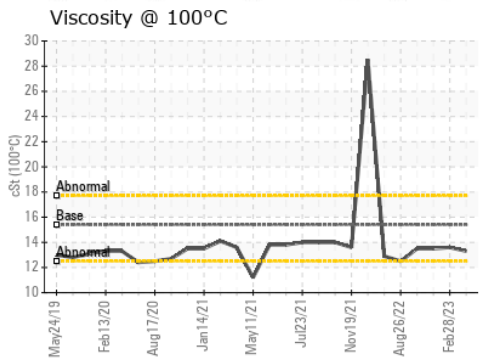
Ferrous Alloys



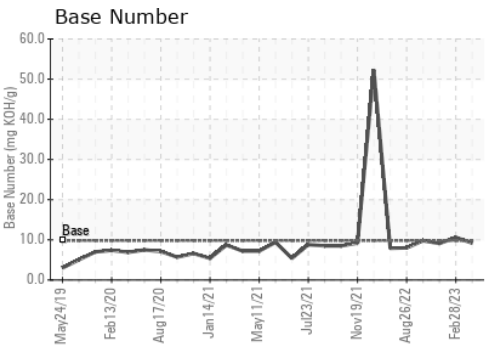
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0066840 **Received** : 06 Jul 2023
Lab Number : 05891143 **Diagnosed** : 09 Jul 2023
Unique Number : 10546953 **Diagnostician** : Wes Davis
Test Package : FLEET (Additional Tests: Glycol)

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 - 018 - Fayetteville
4621 Marracco Drive
Hope Mills, NC
US 28348
Contact: Robert Carter
robert.carter@gflenv.com
T: (910)596-1170
F:

Report Id: GFL018 [WUSCAR] 05891143 (Generated: 07/09/2023 16:50:37) Rev: 1

Submitted By: Robert Carter