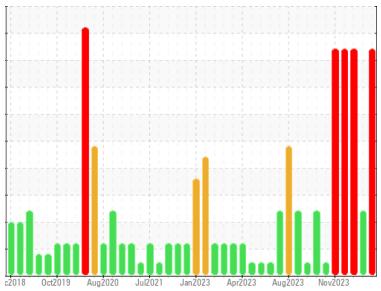
PROBLEM SUMMARY

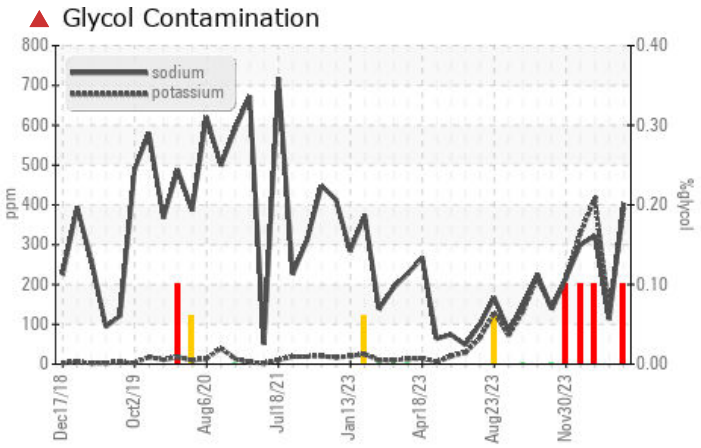
Sample Rating Trend



GLYCOL

Machine Id
10682
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (40 GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you check for the source of the coolant leak. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	ABNORMAL	SEVERE
Potassium	ppm	ASTM D5185m	>20	▲ **390**	▲ 129	▲ 415
Glycol	%	*ASTM D2982		▲ **0.10**	NEG	▲ 0.10

Customer Id: GFL084
Sample No.: GFL0098880
Lab Number: 06131804
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
Change Fluid	---	---	?	We recommend that you drain the oil from the component if this has not already been done.
Flush System	---	---	?	We advise that you flush the component thoroughly before re-filling with oil.
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

05 Feb 2024 Diag: Jonathan Hester

GLYCOL

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

11 Jan 2024 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. Test for glycol is positive. The BN result indicates that there is suitable alkalinity remaining in the oil.

view report

26 Dec 2023 Diag: Jonathan Hester

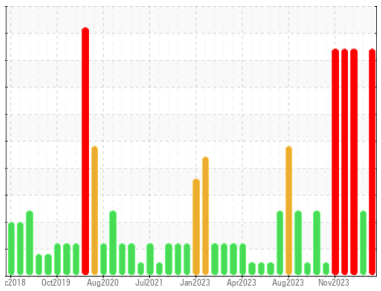
GLYCOL

We advise that you check for the source of the coolant leak. Check for low coolant level. 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. Test for glycol is positive. 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
10682
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (40 GAL)

DIAGNOSIS

▲ Recommendation

We advise that you check for the source of the coolant leak. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. 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

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	history1	history2
Sample Number		Client Info		**GFL0098880**	GFL0098938	GFL0098964
Sample Date		Client Info		**20 Mar 2024**	05 Feb 2024	11 Jan 2024
Machine Age	hrs	Client Info		**18697**	18697	18544
Oil Age	hrs	Client Info		**18544**	18544	17922
Oil Changed		Client Info		**N/A**	N/A	Changed
Sample Status				**SEVERE**	ABNORMAL	SEVERE

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	**<1.0**	<1.0	<1.0
Water		WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>75	**20**	6	30
Chromium	ppm	ASTM D5185m	>5	**1**	<1	1
Nickel	ppm	ASTM D5185m	>4	**<1**	0	0
Titanium	ppm	ASTM D5185m	>2	**<1**	<1	0
Silver	ppm	ASTM D5185m	>2	**<1**	0	0
Aluminum	ppm	ASTM D5185m	>15	**2**	1	3
Lead	ppm	ASTM D5185m	>25	**1**	0	<1
Copper	ppm	ASTM D5185m	>100	**1**	<1	<1
Tin	ppm	ASTM D5185m	>4	**<1**	0	<1
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**<1**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**<1**	2	0
Barium	ppm	ASTM D5185m	0	**0**	11	0
Molybdenum	ppm	ASTM D5185m	60	**88**	59	82
Manganese	ppm	ASTM D5185m	0	**<1**	0	<1
Magnesium	ppm	ASTM D5185m	1010	**895**	792	1058
Calcium	ppm	ASTM D5185m	1070	**1150**	1072	1253
Phosphorus	ppm	ASTM D5185m	1150	**1024**	897	987
Zinc	ppm	ASTM D5185m	1270	**1212**	1102	1279
Sulfur	ppm	ASTM D5185m	2060	**3043**	3155	3090

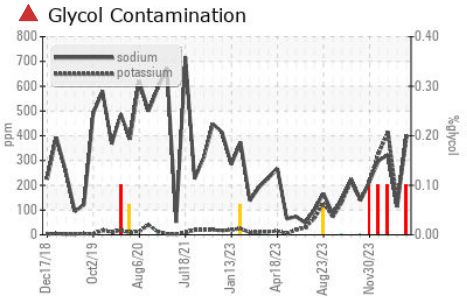
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**7**	6	7
Sodium	ppm	ASTM D5185m		● **404**	▲ 113	▲ 323
Potassium	ppm	ASTM D5185m	>20	▲ **390**	▲ 129	▲ 415
Glycol	%	*ASTM D2982		▲ **0.10**	NEG	▲ 0.10

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>6	**0.2**	0.1	0.4
Nitration	Abs/cm	*ASTM D7624	>20	**10.8**	6.3	12.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	**19.6**	17.5	22.6

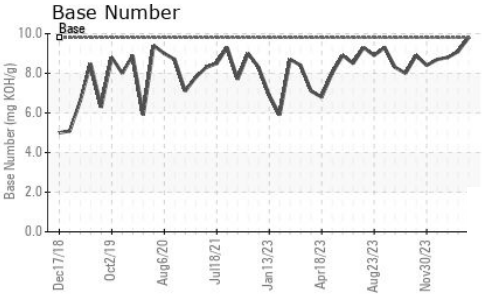
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**16.5**	13.2	19.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**9.8**	9.1	8.8

OIL ANALYSIS REPORT

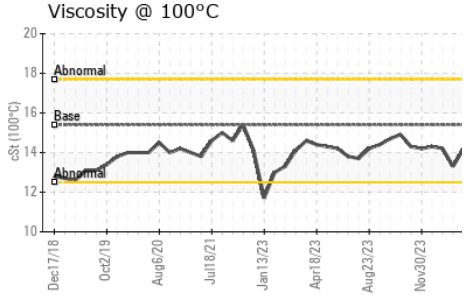
Glycol Contamination



Base Number



Viscosity @ 100°C

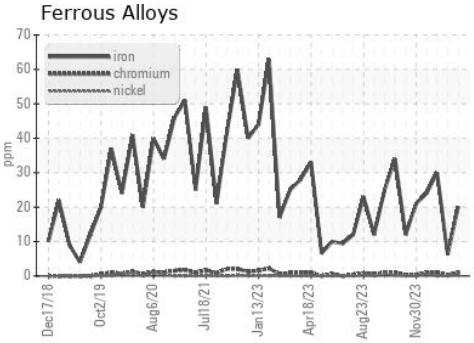


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

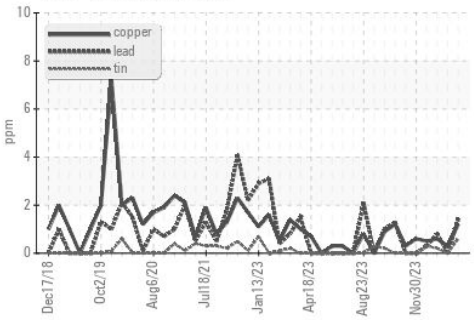
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	**14.2**	13.3	14.2

GRAPHS

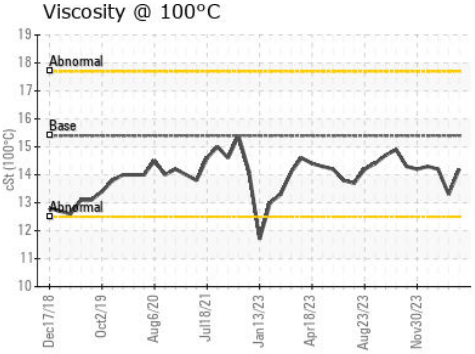
Ferrous Alloys



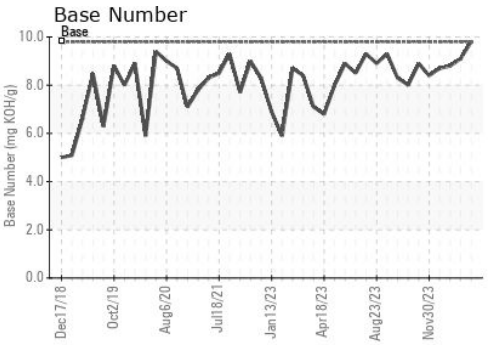
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0098880
Lab Number : 06131804
Unique Number : 10951269
Test Package : FLEET (Additional Tests: Glycol)

Received : 28 Mar 2024
Tested : 01 Apr 2024
Diagnosed : 01 Apr 2024 - Wes Davis

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 - 084 - Clarksville
699 Jack Miller Boulevard
Clarksville, TN
US 37042
Contact: ROBERT THIBAULT
robert.thibault@gflenv.com
T: (931)552-7276
F: (931)572-9674