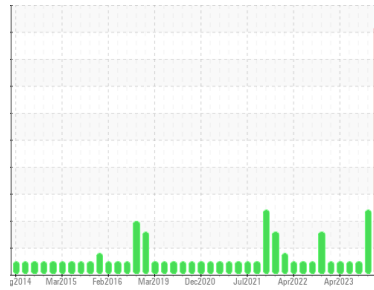




PROBLEM SUMMARY

Sample Rating Trend

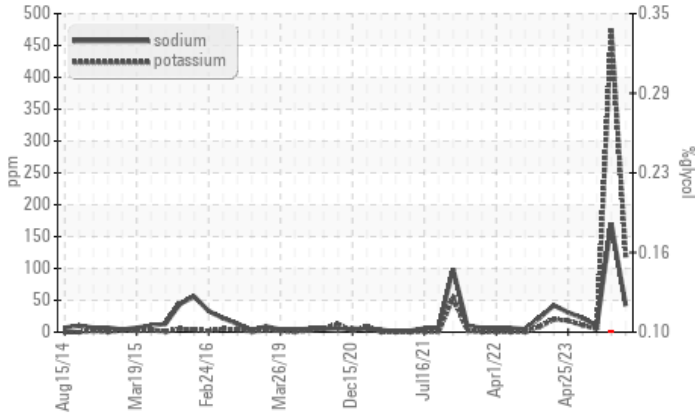
GLYCOL



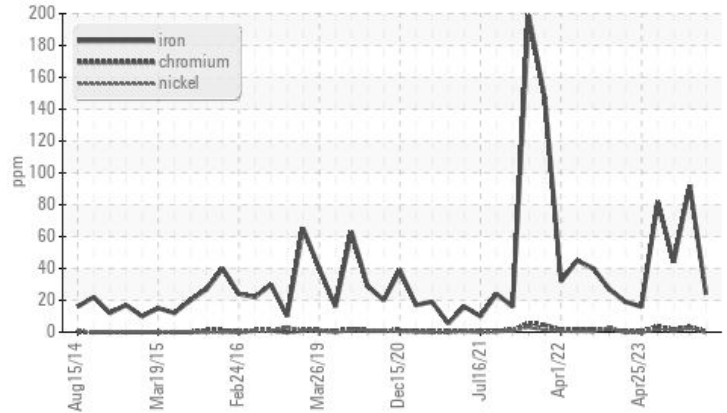
Area
(YA139861)
Machine Id
10034
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (46 QTS)

COMPONENT CONDITION SUMMARY

▲ Glycol Contamination



▲ Ferrous Alloys



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	ABNORMAL	NORMAL
Iron	ppm	ASTM D5185m	>90	▲ 92	24	44
Sodium	ppm	ASTM D5185m		▲ 171	▲ 42	10
Potassium	ppm	ASTM D5185m	>20	▲ 475	▲ 121	5
Glycol	%	*ASTM D2982		▲ 0.10	NEG	NEG

Customer Id: GFL018
Sample No.: GFL0099837
Lab Number: 06110002
Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:
Don Baldrige +1
don.b505@comcast.net

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

10 Feb 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. The BN result indicates that there is suitable alkalinity remaining in the oil.

view report



23 Aug 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



20 Jul 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.

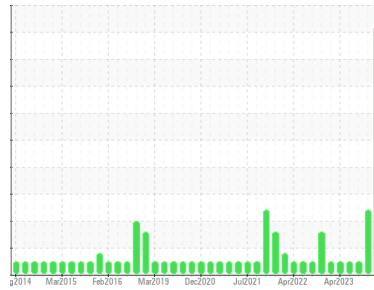
view report





OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Area
(YA139861)
Machine Id
10034
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (46 QTS)

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

Cylinder, crank, or cam shaft wear is indicated.

▲ Contamination

Sodium and/or potassium levels are high. 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.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0099837	GFL0099833	GFL0080592
Sample Date	Client Info		10 Feb 2024	10 Feb 2024	23 Aug 2023
Machine Age	hrs	Client Info	7187	7187	251457
Oil Age	hrs	Client Info	0	600	251457
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			SEVERE	ABNORMAL	NORMAL

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 >90	▲ 92	24	44
Chromium	ppm	ASTM D5185m >20	3	<1	2
Nickel	ppm	ASTM D5185m >2	2	0	<1
Titanium	ppm	ASTM D5185m >2	<1	0	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >20	8	1	7
Lead	ppm	ASTM D5185m >40	8	1	<1
Copper	ppm	ASTM D5185m >330	8	2	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	20	8	4
Barium	ppm	ASTM D5185m 0	0	8	0
Molybdenum	ppm	ASTM D5185m 60	61	59	62
Manganese	ppm	ASTM D5185m 0	<1	0	<1
Magnesium	ppm	ASTM D5185m 1010	724	801	995
Calcium	ppm	ASTM D5185m 1070	1255	1001	1114
Phosphorus	ppm	ASTM D5185m 1150	851	791	1075
Zinc	ppm	ASTM D5185m 1270	1053	1065	1316
Sulfur	ppm	ASTM D5185m 2060	2706	2729	3799

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	15	7	7
Sodium	ppm	ASTM D5185m	▲ 171	▲ 42	10
Potassium	ppm	ASTM D5185m >20	▲ 475	▲ 121	5
Glycol	%	*ASTM D2982	▲ 0.10	NEG	NEG

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >6	1.1	0.3	1.5
Nitration	Abs/cm	*ASTM D7624 >20	10.4	5.8	7.4
Sulfation	Abs/.1mm	*ASTM D7415 >30	21.9	18.4	20.3

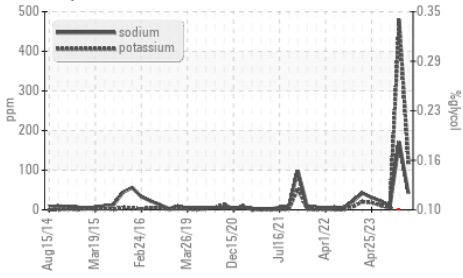
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	17.6	13.8	13.9
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	9.1	9.0	9.1

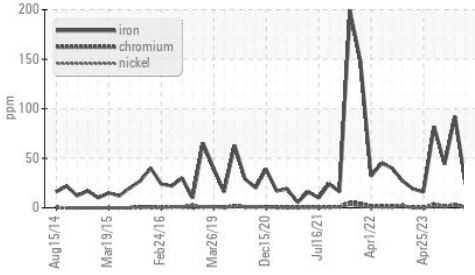


OIL ANALYSIS REPORT

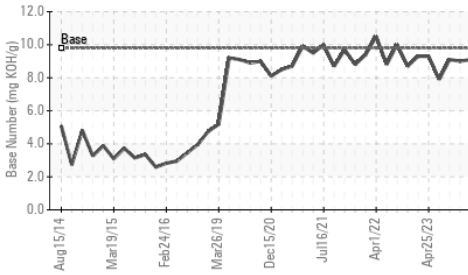
▲ Glycol Contamination



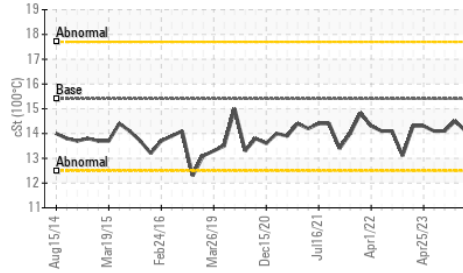
▲ Ferrous Alloys



Base Number



Viscosity @ 100°C



VISUAL

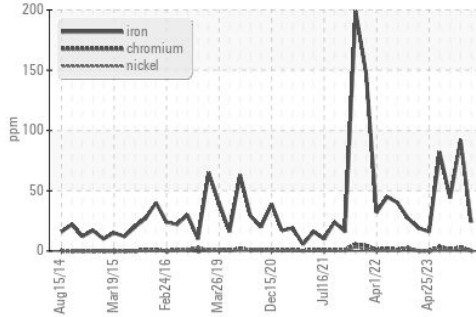
	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES

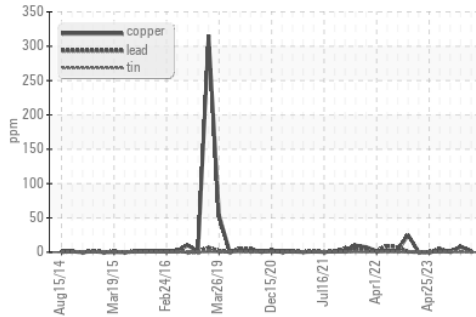
	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.1	14.5

GRAPHS

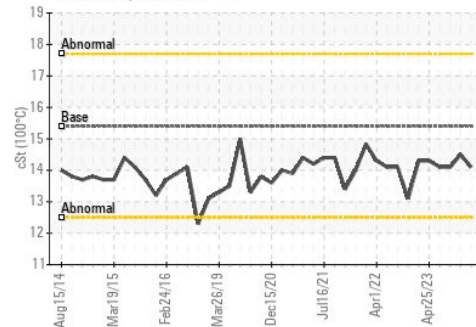
▲ Ferrous Alloys



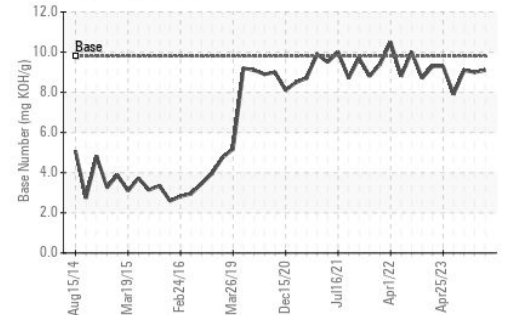
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : GFL0099837

Lab Number : 06110002

Unique Number : 10913499

Test Package : FLEET (Additional Tests: Glycol)

Received : 06 Mar 2024

Tested : 08 Mar 2024

Diagnosed : 08 Mar 2024 - Don Baldrige

GFL Environmental - 018 - Fayetteville

4621 Marracco Drive

Hope Mills, NC

US 28348

Contact: Robert Carter

robert.carter@gflenv.com

T: (910)596-1170

F:

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)