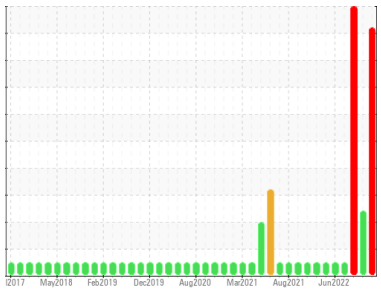
PROBLEM SUMMARY

Sample Rating Trend

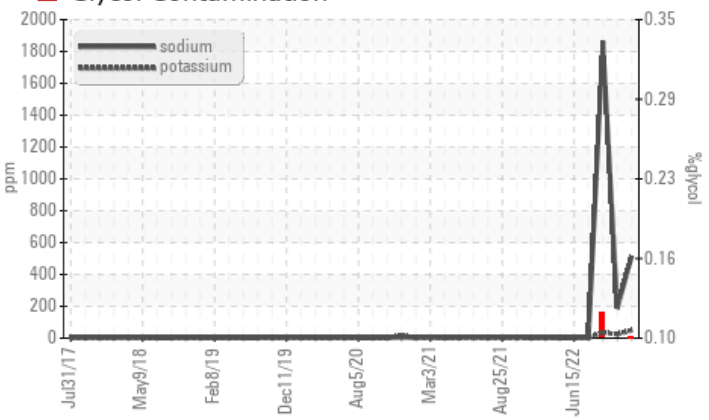


GLYCOL

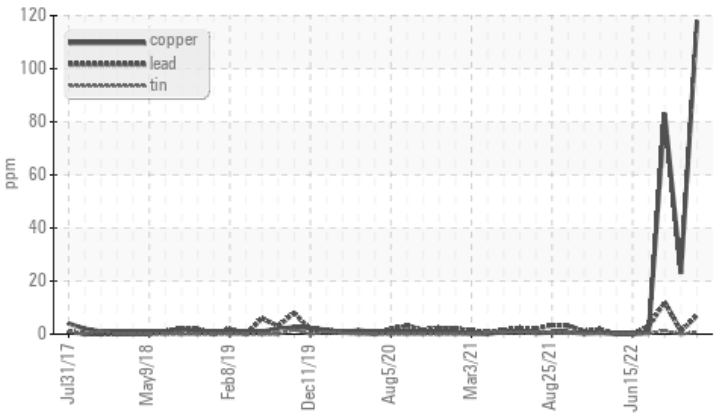
Area
(TX272543)
Machine Id
3750
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (8 GAL)

COMPONENT CONDITION SUMMARY

▲ Glycol Contamination



▲ Non-ferrous Metals



RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	ABNORMAL	SEVERE
Copper	ppm	ASTM D5185m	>90	▲ **118**	23	▲ 83
Sodium	ppm	ASTM D5185m		▲ **512**	▲ 188	● 1861
Potassium	ppm	ASTM D5185m	>20	▲ **49**	▲ 24	▲ 36
Glycol	%	*ASTM D2982		▲ **0.10**	NEG	▲ 0.12

Customer Id: GFL045
Sample No.: GFL0119053
Lab Number: 06148436
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	---	---	?	We recommend that you drain the oil from the component if this has not already been done.
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

GLYCOL

08 Feb 2024 Diag: Jonathan Hester
We advise that you check for possible 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 are high. The BN result indicates that there is suitable alkalinity remaining in the oil.

view report

GLYCOL

15 Jan 2024 Diag: Doug Bogart
We advise that you check for the source of the coolant leak. 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. NOTE: High contamination in the sample has limited the accuracy of Infra-Red data including Total Base Number (TBN) value.Bearing and/or bushing wear is indicated. Sodium and/or potassium levels are high. Test for glycol is positive. Elemental level of silicon (Si) above normal indicating ingress of seal material. There is a high concentration of glycol present in the oil. The oil is no longer serviceable due to the presence of contaminants.

view report

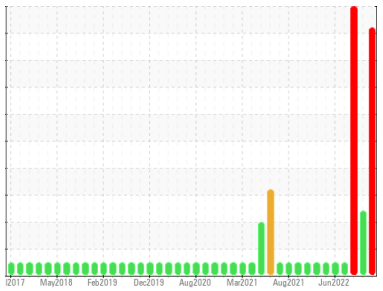
NORMAL

20 Sep 2022 Diag: Wes Davis
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
(TX272543)
Machine Id
3750
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. Check for low coolant level. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Wear
The copper level is abnormal. All other 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. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0119053**	GFL0112140	GFL0103896
Sample Date		Client Info		**11 Apr 2024**	08 Feb 2024	15 Jan 2024
Machine Age	hrs	Client Info		**12877**	12877	12877
Oil Age	hrs	Client Info		**12877**	12877	12877
Oil Changed		Client Info		**N/A**	N/A	N/A
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	>165	**17**	4	40
Chromium	ppm	ASTM D5185m	>5	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>4	**<1**	0	<1
Titanium	ppm	ASTM D5185m	>2	**<1**	0	0
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**2**	<1	3
Lead	ppm	ASTM D5185m	>150	**7**	1	▲ 12
Copper	ppm	ASTM D5185m	>90	▲ **118**	23	▲ 83
Tin	ppm	ASTM D5185m	>5	**<1**	0	1
Vanadium	ppm	ASTM D5185m		**0**	0	<1
Cadmium	ppm	ASTM D5185m		**<1**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**18**	15	105
Barium	ppm	ASTM D5185m	0	**0**	0	<1
Molybdenum	ppm	ASTM D5185m	60	**80**	64	124
Manganese	ppm	ASTM D5185m	0	**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	1010	**932**	850	1021
Calcium	ppm	ASTM D5185m	1070	**1172**	1000	1090
Phosphorus	ppm	ASTM D5185m	1150	**1125**	966	1137
Zinc	ppm	ASTM D5185m	1270	**1232**	1240	1393
Sulfur	ppm	ASTM D5185m	2060	**3423**	2803	3637

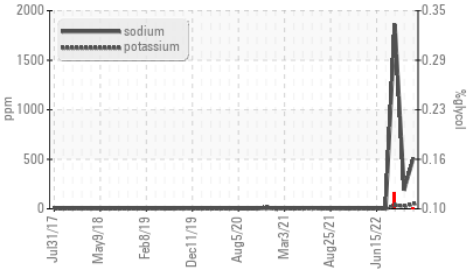
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>35	**13**	9	▲ 40
Sodium	ppm	ASTM D5185m		▲ **512**	▲ 188	● 1861
Potassium	ppm	ASTM D5185m	>20	▲ **49**	▲ 24	▲ 36
Glycol	%	*ASTM D2982		▲ **0.10**	NEG	▲ 0.12

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>7.5	**0.2**	0.1	0.4
Nitration	Abs/cm	*ASTM D7624	>20	**7.4**	5.0	15.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	**18.9**	17.0	15.4

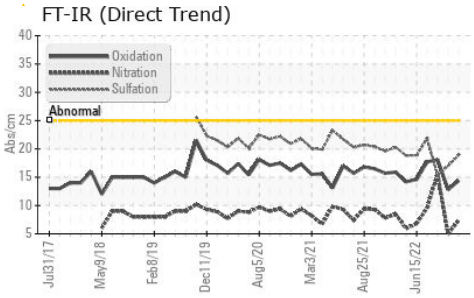
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**14.4**	12.8	18.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**9.9**	10.7	---

OIL ANALYSIS REPORT

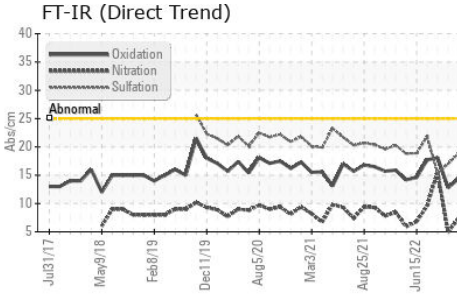
Glycol Contamination



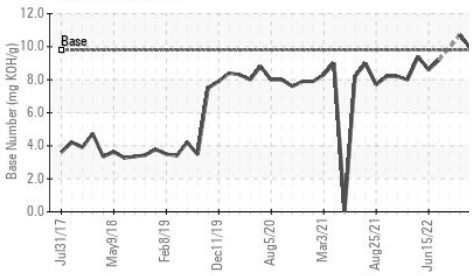
FT-IR (Direct Trend)



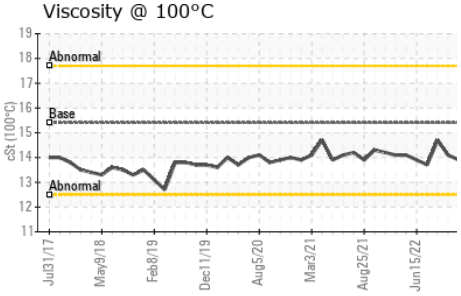
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

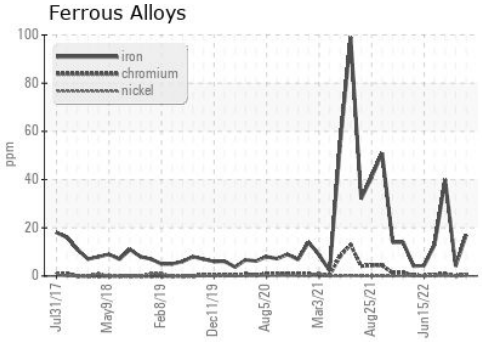


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

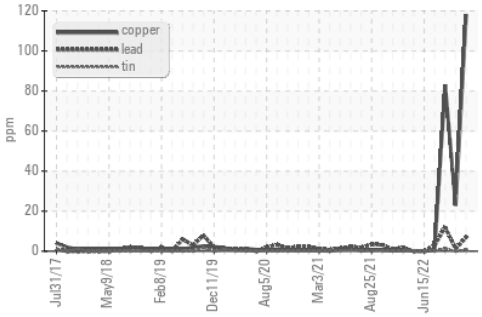
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	**13.9**	14.1	14.7

GRAPHS

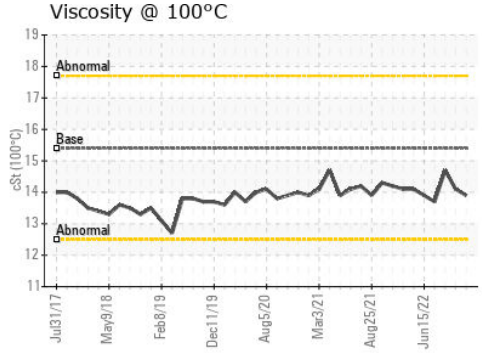
Ferrous Alloys



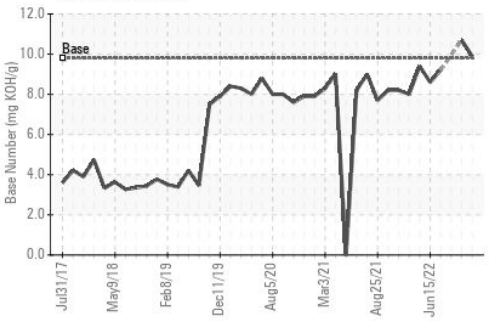
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0119053
Lab Number : 06148436
Unique Number : 10978514
Test Package : FLEET (Additional Tests: Glycol)

Received : 15 Apr 2024
Tested : 17 Apr 2024
Diagnosed : 17 Apr 2024 - Jonathan Hester

Certificate L2367

GFL Environmental - 045 - Tidewater
3821 Cook Blvd.
Chesapeake, VA
US 23323
Contact: ELVIN RODRIGUEZ
elvinrodriguez@gflenv.com
T:
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)