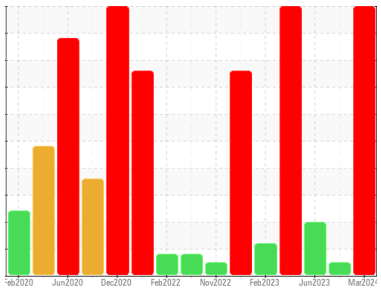
PROBLEM SUMMARY

Machine Id
723025-305163
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

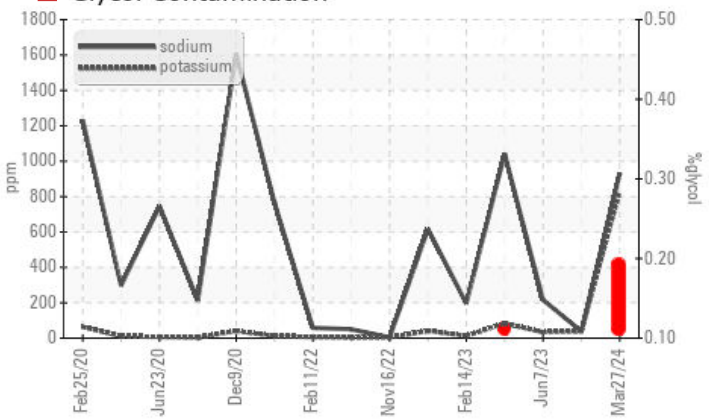
Sample Rating Trend



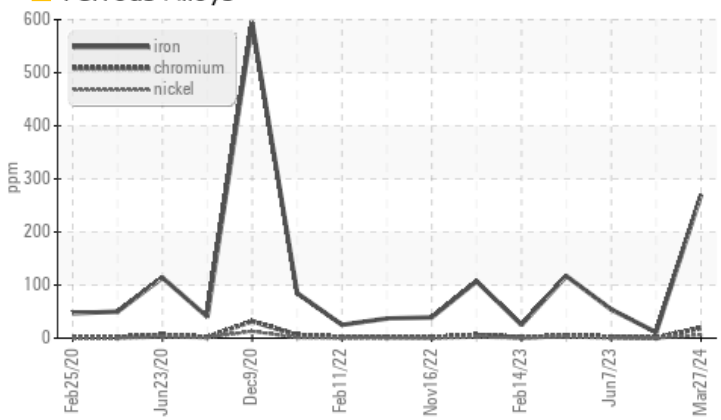
GLYCOL

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	NORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>80	▲ **270**	11	54
Chromium	ppm	ASTM D5185m	>5	▲ **19**	<1	2
Sodium	ppm	ASTM D5185m		▲ **931**	39	216
Potassium	ppm	ASTM D5185m	>20	▲ **831**	38	34
Glycol	%	*ASTM D2982		▲ **0.20**	NEG	NEG

Customer Id: GFL856
Sample No.: GFL0106763
Lab Number: 06136156
Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:
Don Baldridge +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

NORMAL

02 Dec 2023 Diag: Sean Felton
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 acceptable for the time in service.

view report

GLYCOL

07 Jun 2023 Diag: Jonathan Hester
We recommend you service the filters on this component. Resample at the next service interval to monitor.All component wear rates are normal. Sodium and/or potassium levels are high. There is an abnormal amount of solids and carbon present in the oil. Test for glycol is negative. 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

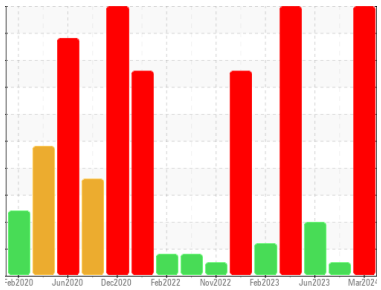
GLYCOL

23 Mar 2023 Diag: Doug Bogart
We advise that you check for the source of the coolant leak. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.Cylinder, crank, or cam shaft wear is indicated. Sodium and/or potassium levels are high. Test for glycol is positive. There is an abnormal amount of solids and carbon present in the 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.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL

Machine Id
723025-305163
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
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 due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0106763**	GFL0092073	GFL0078176
Sample Date		Client Info		**27 Mar 2024**	02 Dec 2023	07 Jun 2023
Machine Age	hrs	Client Info		**4130**	302439	302439
Oil Age	hrs	Client Info		**600**	299282	0
Oil Changed		Client Info		**Changed**	Not Changd	Not Changd
Sample Status				**SEVERE**	NORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>5	**<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	>80	▲ **270**	11	54
Chromium	ppm	ASTM D5185m	>5	▲ **19**	<1	2
Nickel	ppm	ASTM D5185m	>2	**6**	0	<1
Titanium	ppm	ASTM D5185m		**1**	0	0
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>30	**20**	1	4
Lead	ppm	ASTM D5185m	>30	**31**	0	<1
Copper	ppm	ASTM D5185m	>150	**122**	1	29
Tin	ppm	ASTM D5185m	>5	**6**	0	<1
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**0**	7	2
Barium	ppm	ASTM D5185m	0	**1**	2	0
Molybdenum	ppm	ASTM D5185m	60	**456**	58	69
Manganese	ppm	ASTM D5185m	0	**4**	0	<1
Magnesium	ppm	ASTM D5185m	1010	**748**	739	966
Calcium	ppm	ASTM D5185m	1070	**812**	1146	1065
Phosphorus	ppm	ASTM D5185m	1150	**766**	847	1041
Zinc	ppm	ASTM D5185m	1270	**996**	1017	1299
Sulfur	ppm	ASTM D5185m	2060	**2930**	2848	3557

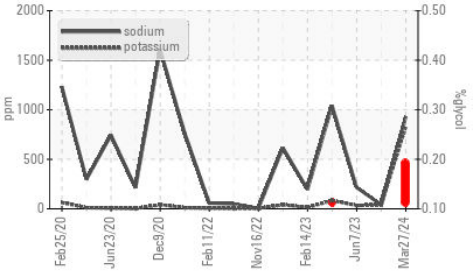
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	**53**	6	10
Sodium	ppm	ASTM D5185m		▲ **931**	39	● 216
Potassium	ppm	ASTM D5185m	>20	▲ **831**	38	34
Glycol	%	*ASTM D2982		▲ **0.20**	NEG	NEG

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.8**	0.2	▲ 3.1
Nitration	Abs/cm	*ASTM D7624	>20	**16.9**	6.8	11.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	**24.3**	18.0	26.1

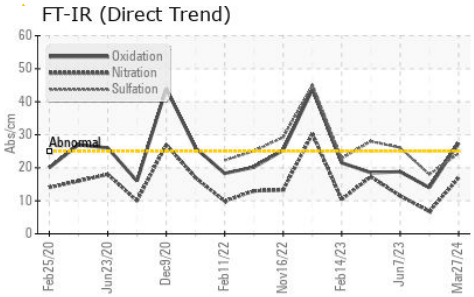
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**27.4**	14.0	18.8
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**8.0**	8.4	8.8

OIL ANALYSIS REPORT

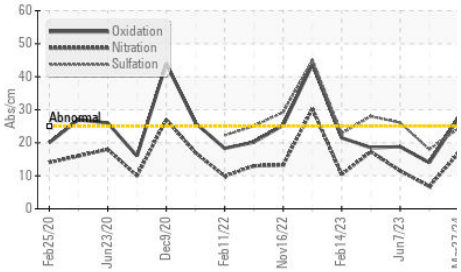
Glycol Contamination



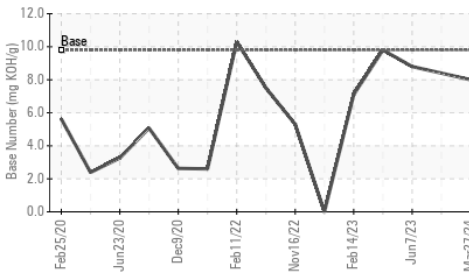
FT-IR (Direct Trend)



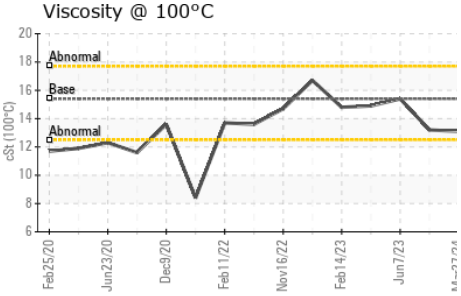
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

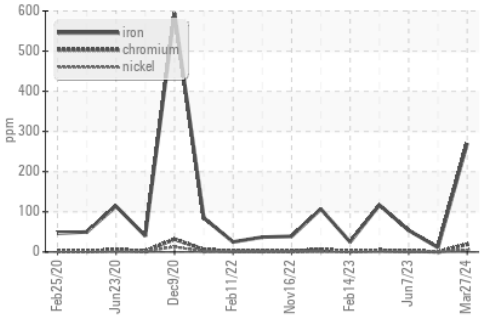


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

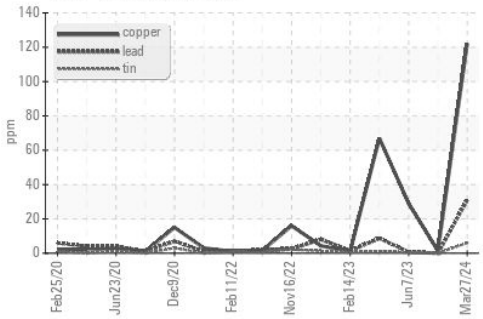
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	**13.1**	13.2	15.4

GRAPHS

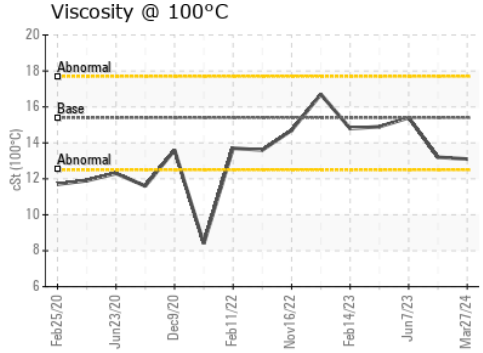
Ferrous Alloys



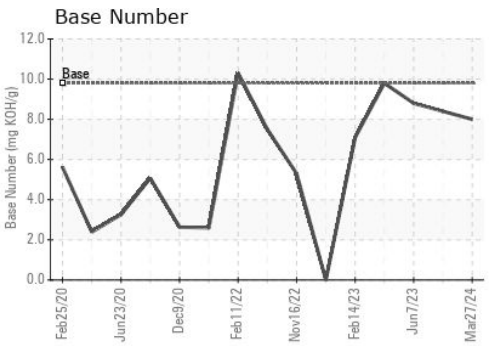
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0106763
Lab Number : 06136156
Unique Number : 10955621
Test Package : FLEET (Additional Tests: Glycol)

Received : 02 Apr 2024
Tested : 04 Apr 2024
Diagnosed : 04 Apr 2024 - Don Baldridge

GFL Environmental - 856 - Houston South
8515 Highway 6 South
Houston, TX
US 77083
Contact: Apolinar Zacarias
pzacariascano@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)