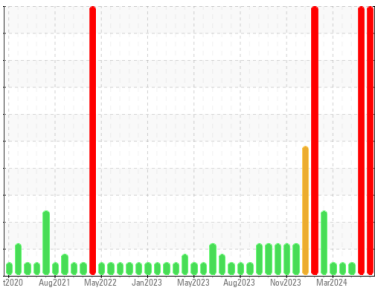
PROBLEM SUMMARY

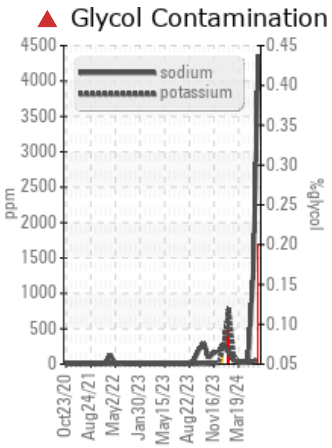
Sample Rating Trend

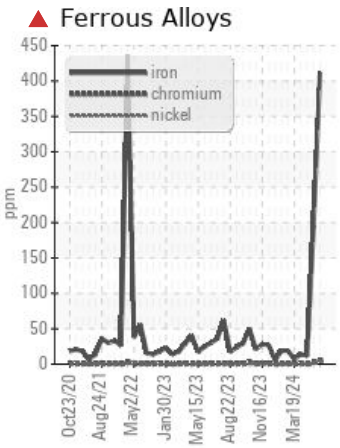


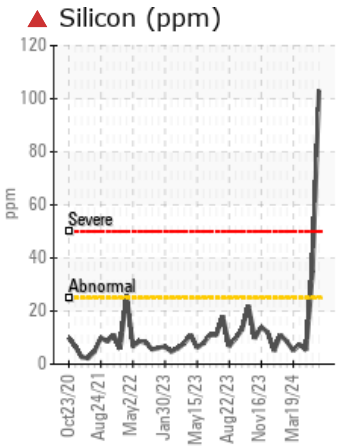
GLYCOL

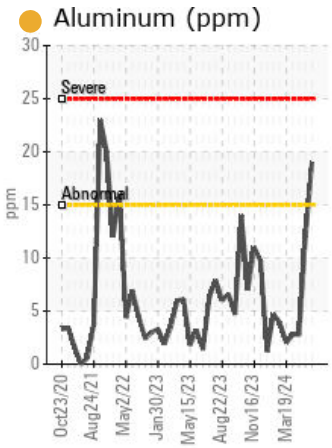
Area
(DXE868)
Machine Id
3667
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (38 QTS)

COMPONENT CONDITION SUMMARY









RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend that you drain the oil and perform a filter service on this component if not already done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	SEVERE	NORMAL
Iron	ppm	ASTM D5185m	>75	▲ **412**	▲ 194	12
Silicon	ppm	ASTM D5185m	>25	▲ **103**	▲ 35	5
Sodium	ppm	ASTM D5185m		▲ **4352**	▲ 1336	33
Potassium	ppm	ASTM D5185m	>20	▲ **59**	▲ 39	19
Glycol	%	*ASTM D2982		▲ **0.20**	NEG	NEG

Customer Id: GFL073
Sample No.: GFL0111502
Lab Number: 06187504
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
Inspect Wear Source	---	---	?	We advise that you inspect for the source(s) of wear.
Change Fluid	---	---	?	We recommend that you drain the oil and perform a filter service on this component if not already done.
Change Filter	---	---	?	We recommend that you drain the oil and perform a filter service on this component if not already done.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Dirt Access	---	---	?	We advise that you check the air filter, air induction system, and any areas where dirt may enter the component.
Check Glycol Access	---	---	?	We advise that you check for the source of the coolant leak.

HISTORICAL DIAGNOSIS

WEAR

26 Apr 2024 Diag: Jonathan Hester

We advise that you check for the source of the coolant leak. Check for low coolant level. We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend that you drain the oil and perform a filter service on this component if not already done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.Cylinder, crank, or cam shaft wear is indicated. Sodium and/or potassium levels are high. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

view report

NORMAL

29 Mar 2024 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

NORMAL

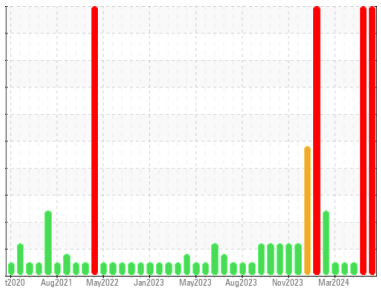
22 Mar 2024 Diag: Wes Davis

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
(DXE868)
Machine Id
3667
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (38 QTS)

DIAGNOSIS

Recommendation
We advise that you check for the source of the coolant leak. Check for low coolant level. We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend that you drain the oil and perform a filter service on this component if not already done. We advise that you inspect for the source(s) of wear. 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. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. There is a high concentration of glycol present in the oil.

Fluid Condition
The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0111502**	GFL0111469	GFL0111458
Sample Date		Client Info		**20 May 2024**	26 Apr 2024	29 Mar 2024
Machine Age	hrs	Client Info		**21383**	21260	21112
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**Not Changd**	Not Changd	Not Changd
Sample Status				**SEVERE**	SEVERE	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	>75	▲ **412**	▲ 194	12
Chromium	ppm	ASTM D5185m	>5	**5**	2	<1
Nickel	ppm	ASTM D5185m	>4	**4**	1	0
Titanium	ppm	ASTM D5185m	>2	**0**	0	0
Silver	ppm	ASTM D5185m	>2	**<1**	0	0
Aluminum	ppm	ASTM D5185m	>15	● **19**	● 12	3
Lead	ppm	ASTM D5185m	>25	**4**	<1	0
Copper	ppm	ASTM D5185m	>100	**32**	10	4
Tin	ppm	ASTM D5185m	>4	**2**	<1	<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	**237**	112	8
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	60	**206**	95	55
Manganese	ppm	ASTM D5185m	0	**2**	1	<1
Magnesium	ppm	ASTM D5185m	1010	**990**	817	858
Calcium	ppm	ASTM D5185m	1070	**1112**	883	965
Phosphorus	ppm	ASTM D5185m	1150	**1090**	919	956
Zinc	ppm	ASTM D5185m	1270	**1339**	1061	1128
Sulfur	ppm	ASTM D5185m	2060	**3862**	3252	3500

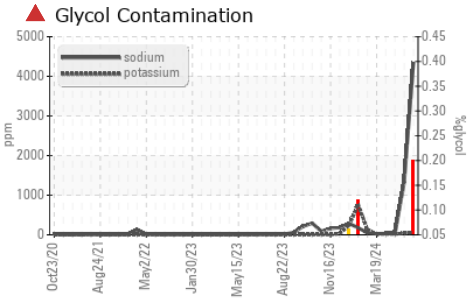
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	▲ **103**	▲ 35	5
Sodium	ppm	ASTM D5185m		▲ **4352**	▲ 1336	33
Potassium	ppm	ASTM D5185m	>20	▲ **59**	▲ 39	19
Glycol	%	*ASTM D2982		▲ **0.20**	NEG	NEG

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>6	**1.4**	1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	**17.7**	12.4	6.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	**25.8**	22.1	18.1

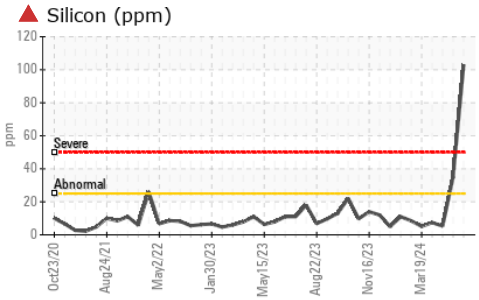
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**18.0**	15.6	14.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**26.9**	14.2	8.6

OIL ANALYSIS REPORT

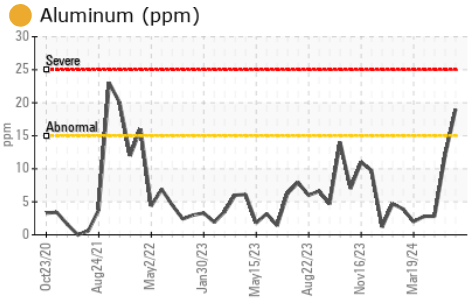
Glycol Contamination



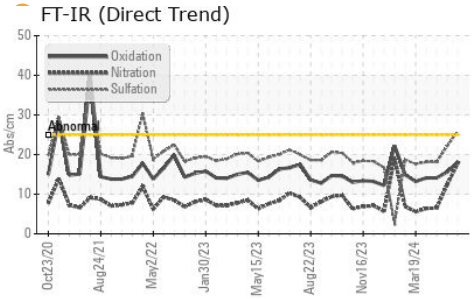
Silicon (ppm)



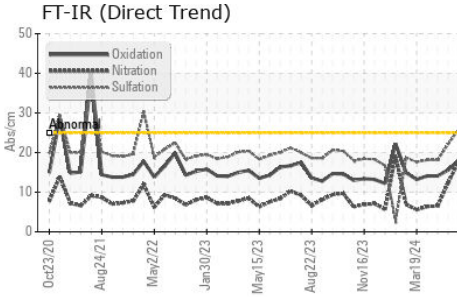
Aluminum (ppm)



FT-IR (Direct Trend)



FT-IR (Direct Trend)

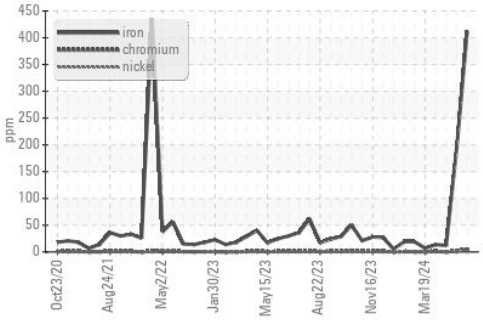


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

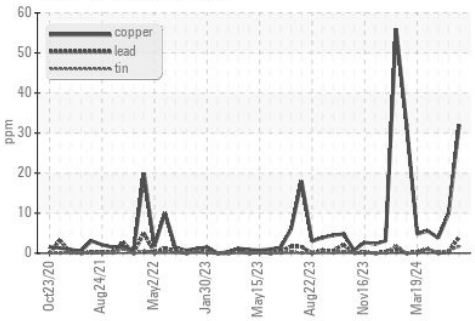
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	**17.7**	16.3	14.5

GRAPHS

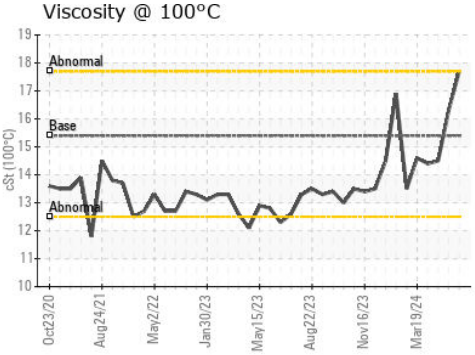
Ferrous Alloys



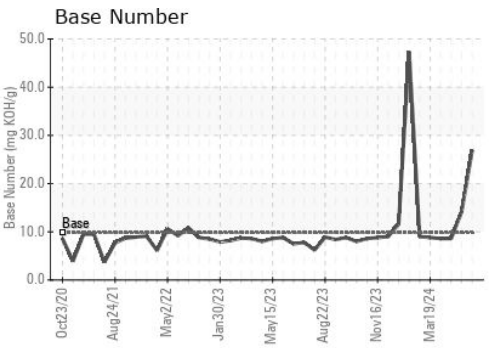
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0111502
Lab Number : 06187504
Unique Number : 11044256
Test Package : FLEET (Additional Tests: Glycol)

Received : 22 May 2024
Tested : 24 May 2024
Diagnosed : 24 May 2024 - Don Baldridge

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 - 073 - Warner Robins - Transwaste
155 Story Road
Warner Robins, GA
US 31093
Contact: Mike Taft
T:
F:

Report Id: GFL073 [WUSCAR] 06187504 (Generated: 05/24/2024 11:39:18) Rev: 1

Submitted By: JOSH MALONEY