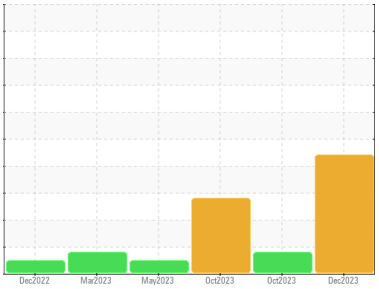
PROBLEM SUMMARY

Sample Rating Trend

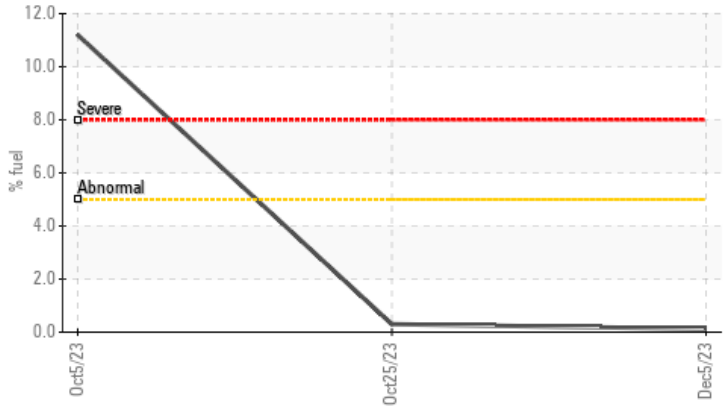


FUEL

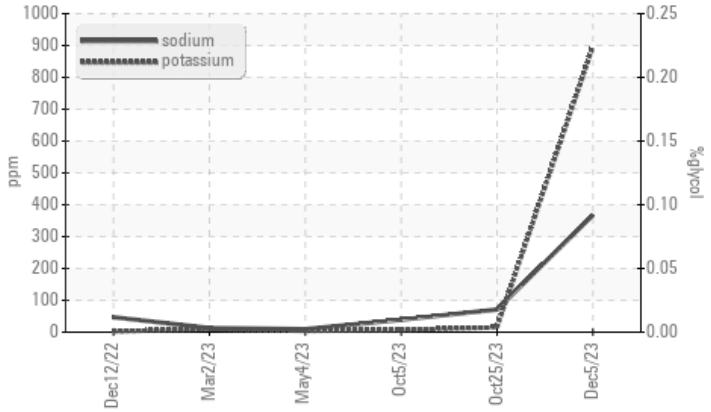
Machine Id
122036
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY

Fuel Dilution



Glycol Contamination



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
Sodium	ppm	ASTM D5185m		▲ **368**	71	39
Potassium	ppm	ASTM D5185m	>20	▲ **896**	15	6
Fuel	%	ASTM D3524	>5	⬢ **0.12**	0.3	⬢ 11.2

Customer Id: GFL821
Sample No.: GFL0090289
Lab Number: 06027310
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

25 Oct 2023 Diag: Don Baldridge

WEAR

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.Cylinder, crank, or cam shaft wear is indicated. All other component wear rates are normal. Tests indicate that there is no fuel present in the oil. 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

05 Oct 2023 Diag: Wes Davis

FUEL

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.Metal levels are typical for a new component breaking in. There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

view report

04 May 2023 Diag: Wes Davis

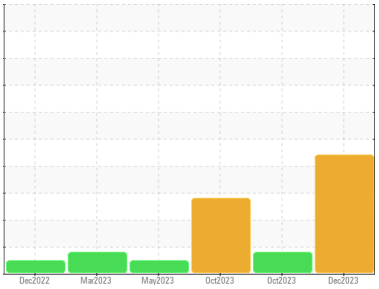
NORMAL

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



FUEL

Machine Id
122036
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. 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
All component wear rates are normal.

Contamination
Sodium and/or potassium levels are high. 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		**GFL0090289**	GFL0090252	GFL0090145
Sample Date		Client Info		**05 Dec 2023**	25 Oct 2023	05 Oct 2023
Machine Age	hrs	Client Info		**1813**	24085	431860
Oil Age	hrs	Client Info		**150**	600	6000
Oil Changed		Client Info		**Not Changd**	Changed	Changed
Sample Status				**SEVERE**	ABNORMAL	SEVERE

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	**15**	▲ 130	27
Chromium	ppm	ASTM D5185m	>20	**<1**	2	<1
Nickel	ppm	ASTM D5185m	>4	**<1**	<1	0
Titanium	ppm	ASTM D5185m		**11**	<1	0
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**6**	6	8
Lead	ppm	ASTM D5185m	>40	**20**	0	<1
Copper	ppm	ASTM D5185m	>330	**1**	2	3
Tin	ppm	ASTM D5185m	>15	**<1**	<1	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**<1**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**31**	<1	5
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	60	**130**	63	51
Manganese	ppm	ASTM D5185m	0	**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	1010	**584**	966	773
Calcium	ppm	ASTM D5185m	1070	**1339**	1071	855
Phosphorus	ppm	ASTM D5185m	1150	**713**	988	848
Zinc	ppm	ASTM D5185m	1270	**802**	1238	1045
Sulfur	ppm	ASTM D5185m	2060	**3402**	2733	2908

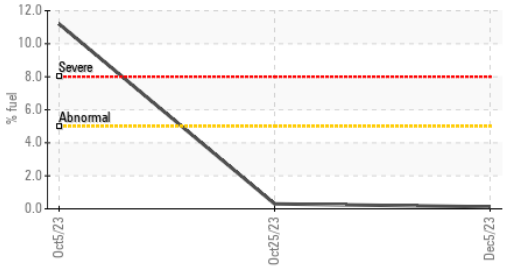
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**8**	9	9
Sodium	ppm	ASTM D5185m		▲ **368**	71	39
Potassium	ppm	ASTM D5185m	>20	▲ **896**	15	6
Fuel	%	ASTM D3524	>5	● **0.12**	0.3	● 11.2
Glycol	%	*ASTM D2982		**NEG**	NEG	NEG

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0**	1.8	0.9
Nitration	Abs/cm	*ASTM D7624	>20	**4.0**	10.4	7.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	**17.2**	22.6	20.1

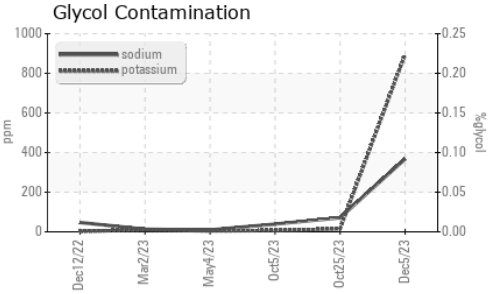
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**12.7**	16.8	15.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**8.9**	8.9	7.8

OIL ANALYSIS REPORT

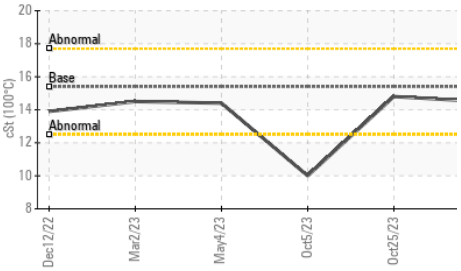
Fuel Dilution



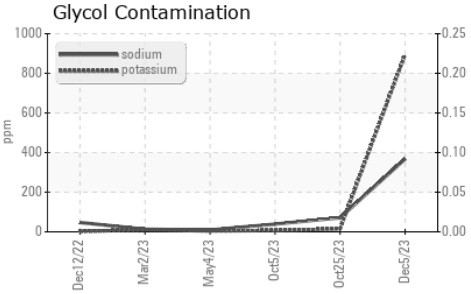
Glycol Contamination



Viscosity @ 100°C



Glycol Contamination

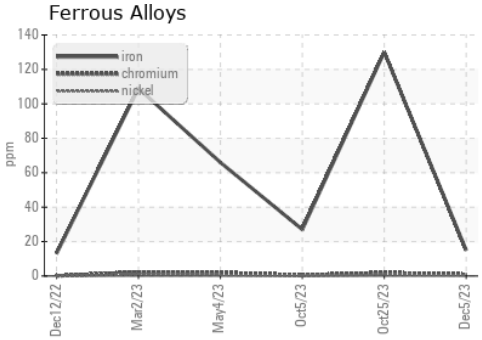


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

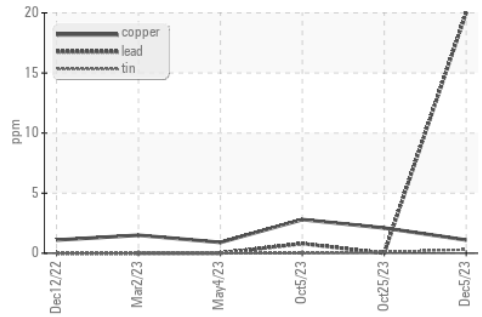
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	**14.5**	14.8	10.0

GRAPHS

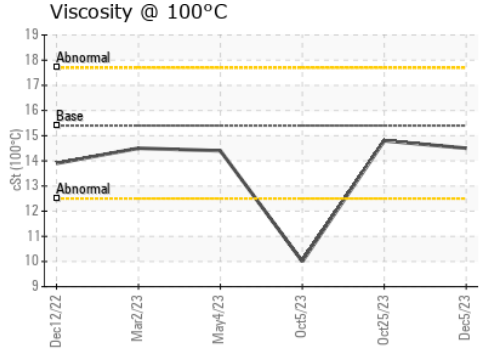
Ferrous Alloys



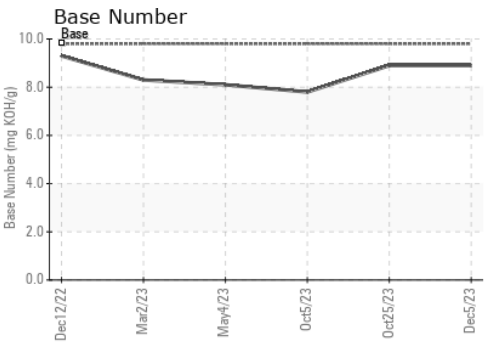
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0090289 **Received** : 07 Dec 2023
Lab Number : 06027310 **Diagnosed** : 11 Dec 2023
Unique Number : 10777101 **Diagnostician** : Jonathan Hester
Test Package : FLEET (Additional Tests: Glycol, PercentFuel)

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 - 821 - Ozarks Hauling
33924 Olath Drive
Lebanon, MO
US 65536
Contact: Landen Johnson
landen.johnson@gflenv.com
T: (417)664-0010
F:

Report Id: GFL821 [WUSCAR] 06027310 (Generated: 12/11/2023 08:18:09) Rev: 1

Submitted By: GFL821, GFL824 and GFL829 - Landen Johnson