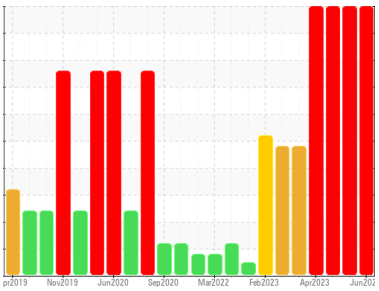
PROBLEM SUMMARY

Machine Id
723026-305165
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

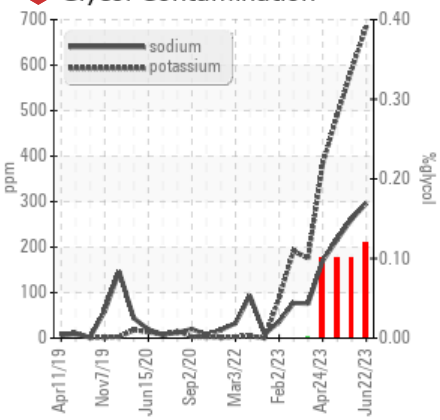
Sample Rating Trend



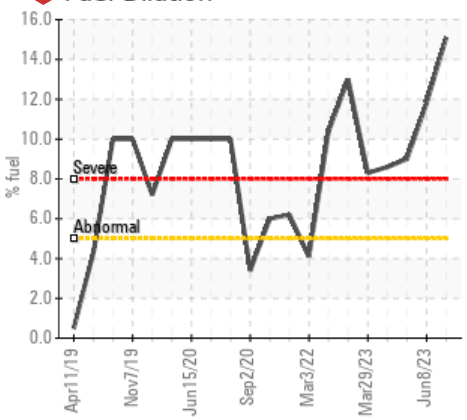
GLYCOL

COMPONENT CONDITION SUMMARY

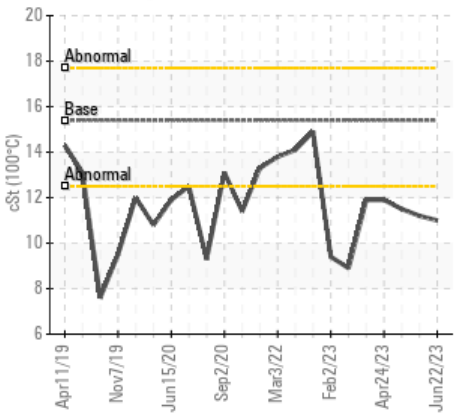
Glycol Contamination



Fuel Dilution



Viscosity @ 100°C



RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. We advise that you check the fuel injection system. 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.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	SEVERE	SEVERE
Sodium	ppm	ASTM D5185m		▲ **296**	▲ 262	▲ 217
Potassium	ppm	ASTM D5185m	>20	▲ **685**	▲ 591	▲ 490
Fuel	%	ASTM D3524	>5	⬢ **15.1**	⬢ 11.8	⬢ 9.0
Glycol	%	*ASTM D2982		⬢ **0.12**	⬢ 0.10	⬢ 0.10
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **11.0**	▲ 11.2	▲ 11.5

Customer Id: GFL856
Sample No.: GFL0084709
Lab Number: 05884941
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 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 Fuel/injector System	---	---	?	We advise that you check the fuel injection system.
Check Glycol Access	---	---	?	We advise that you check for the source of the coolant leak.

HISTORICAL DIAGNOSIS

08 Jun 2023 Diag: Wes Davis

GLYCOL

We advise that you check the fuel injection system. We advise that you check for the source of the coolant leak. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. We recommend an early resample to monitor this condition.All component wear rates are normal. Test for glycol is positive. There is a high amount of fuel present in the oil. There is a high concentration of glycol 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

08 May 2023 Diag: Jonathan Hester

GLYCOL

We advise that you check for the source of the coolant leak. Check for low coolant level. We advise that you check the fuel injection system. 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.All component wear rates are normal. Sodium and/or potassium levels are high. There is a high amount of fuel present in the oil. Fuel is present in the oil and is lowering the viscosity. 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

24 Apr 2023 Diag: Wes Davis

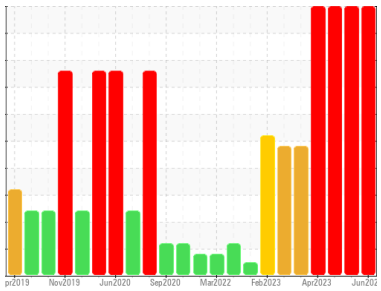
GLYCOL

We advise that you check the fuel injection system. We advise that you check for the source of the coolant leak. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. We recommend an early resample to monitor this condition.All component wear rates are normal. Test for glycol is positive. There is a high amount of fuel present in the oil. There is a high concentration of glycol 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. The oil is no longer serviceable due to the presence of contaminants.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL

Machine Id
723026-305165
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 advise that you check the fuel injection system. 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.

Wear

All component wear rates are normal.

Contamination

Sodium and/or potassium levels are high. There is a high amount of fuel present in the oil.

Fluid Condition

Fuel is present in the oil and is lowering the viscosity. 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	history 1	history 2
Sample Number		Client Info		**GFL0084709**	GFL0078177	GFL0078129
Sample Date		Client Info		**22 Jun 2023**	08 Jun 2023	08 May 2023
Machine Age	mls	Client Info		**323200**	322155	320626
Oil Age	mls	Client Info		**0**	0	0
Oil Changed		Client Info		**Not Changd**	Not Changd	Not Changd
Sample Status				**SEVERE**	SEVERE	SEVERE

WEAR METALS		method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>80	**74**	64	52
Chromium	ppm	ASTM D5185m	>5	**4**	4	3
Nickel	ppm	ASTM D5185m	>2	**<1**	<1	1
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m	>3	**<1**	<1	0
Aluminum	ppm	ASTM D5185m	>30	**6**	6	4
Lead	ppm	ASTM D5185m	>30	**2**	2	2
Copper	ppm	ASTM D5185m	>150	**55**	55	64
Tin	ppm	ASTM D5185m	>5	**2**	2	1
Vanadium	ppm	ASTM D5185m		**0**	<1	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m	0	**4**	5	3
Barium	ppm	ASTM D5185m	0	**<1**	0	4
Molybdenum	ppm	ASTM D5185m	60	**104**	95	93
Manganese	ppm	ASTM D5185m	0	**2**	2	2
Magnesium	ppm	ASTM D5185m	1010	**745**	774	797
Calcium	ppm	ASTM D5185m	1070	**938**	1007	1089
Phosphorus	ppm	ASTM D5185m	1150	**762**	794	851
Zinc	ppm	ASTM D5185m	1270	**1037**	1087	1106
Sulfur	ppm	ASTM D5185m	2060	**2995**	3171	2891

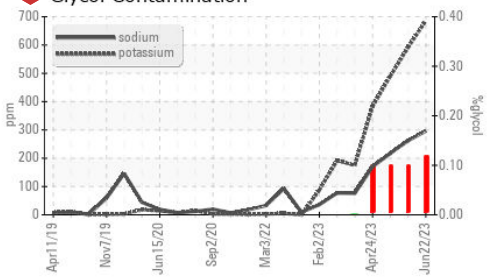
CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m	>20	**15**	15	13
Sodium	ppm	ASTM D5185m		▲ **296**	▲ 262	▲ 217
Potassium	ppm	ASTM D5185m	>20	▲ **685**	▲ 591	▲ 490
Fuel	%	ASTM D3524	>5	⬢ **15.1**	⬢ 11.8	⬢ 9.0
Glycol	%	*ASTM D2982		⬢ **0.12**	⬢ 0.10	⬢ 0.10

INFRA-RED		method	limit/base	current	history 1	history 2
Soot %	%	*ASTM D7844	>3	**2.1**	1.6	1.3
Nitration	Abs/cm	*ASTM D7624	>20	**16.2**	13.9	12.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	**28.4**	25.7	23.5

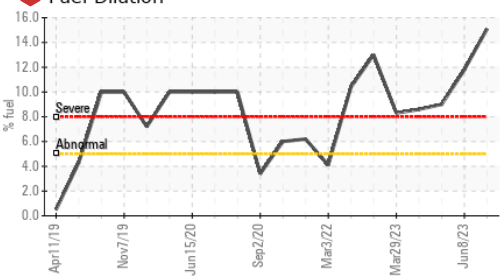
FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**25.2**	23.5	20.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**6.7**	7.3	7.4

OIL ANALYSIS REPORT

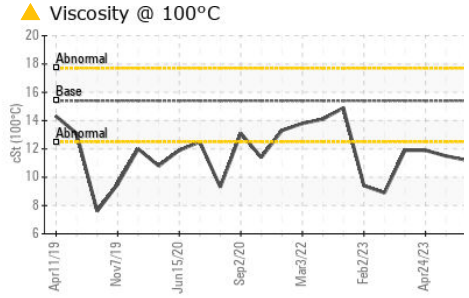
Glycol Contamination



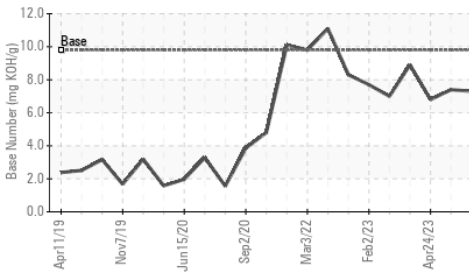
Fuel Dilution



Viscosity @ 100°C



Base Number

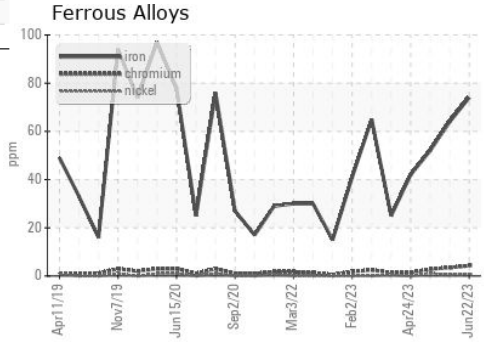


VISUAL		method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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

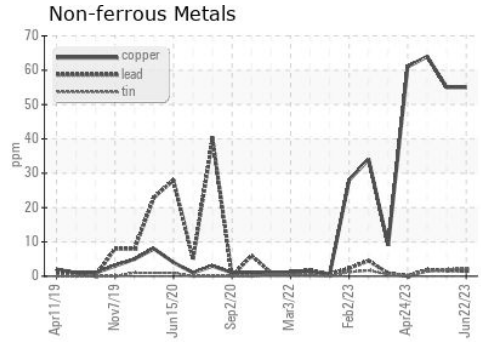
FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **11.0**	▲ 11.2	▲ 11.5

GRAPHS

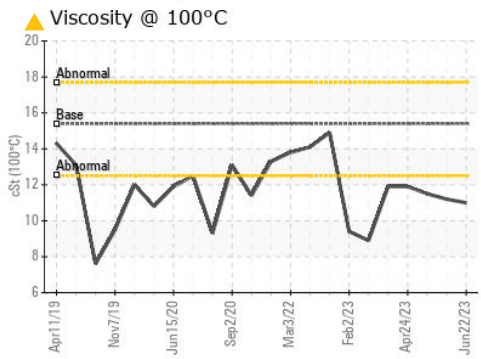
Ferrous Alloys



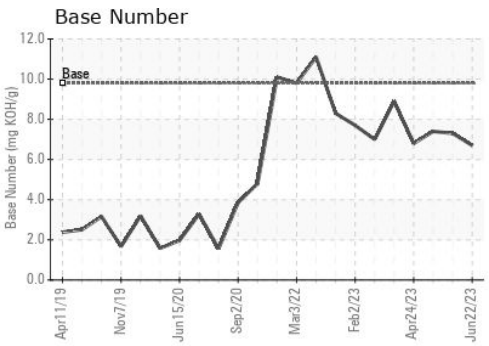
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0084709 **Received** : 27 Jun 2023
Lab Number : 05884941 **Diagnosed** : 03 Jul 2023
Unique Number : 10535424 **Diagnostician** : Jonathan Hester
Test Package : FLEET (Additional Tests: 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)

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