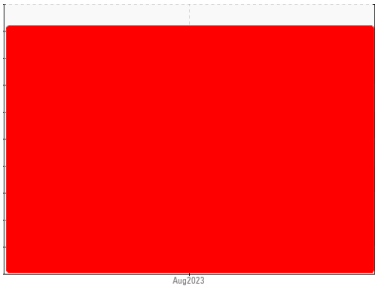
PROBLEM SUMMARY

Sample Rating Trend

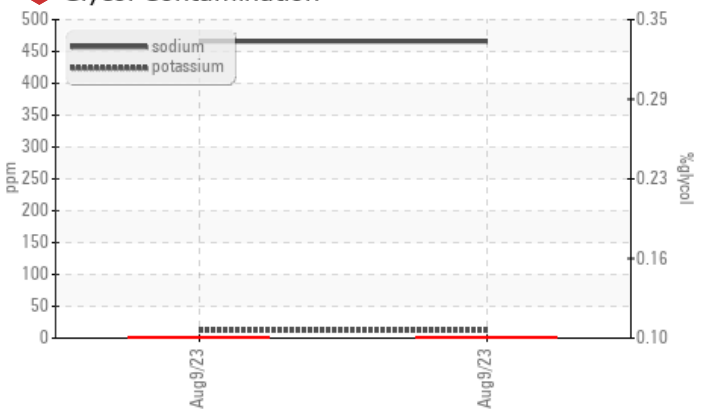


GLYCOL

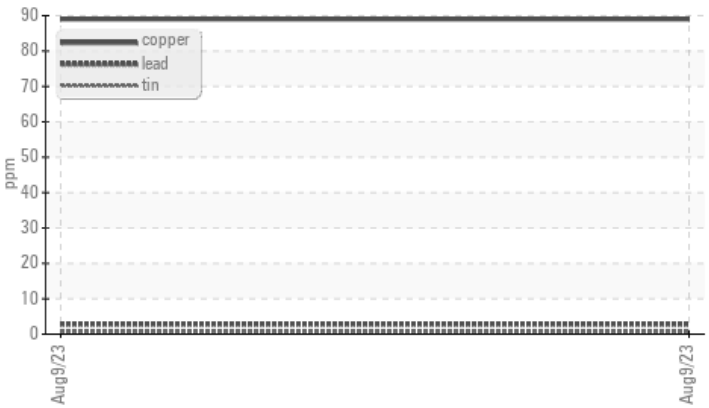
Machine Id
827089
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY

Glycol Contamination



Non-ferrous Metals



RECOMMENDATION

We advise that you check for possible coolant leak. 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**	---	---
Copper	ppm	ASTM D5185m	>85	▲ **89**	---	---
Sodium	ppm	ASTM D5185m		▲ **466**	---	---
Potassium	ppm	ASTM D5185m	>20	▲ **12**	---	---
Glycol	%	*ASTM D2982		⬢ **0.10**	---	---

Customer Id: GFL916
Sample No.: GFL0066951
Lab Number: 05937027
Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:
Doug Bogart +1 (800)237-1369 x4016
dougb@wearcheckusa.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

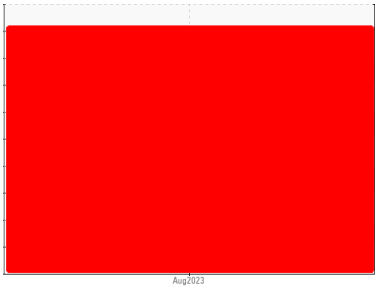
RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid	---	---	?	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

OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL

Machine Id
827089
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check for possible coolant leak. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear

The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). 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 condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0066951**	---	---
Sample Date		Client Info		**09 Aug 2023**	---	---
Machine Age	hrs	Client Info		**11167**	---	---
Oil Age	hrs	Client Info		**0**	---	---
Oil Changed		Client Info		**Changed**	---	---
Sample Status				**SEVERE**	---	---

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>5	**<1.0**	---	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>110	**86**	---	---
Chromium	ppm	ASTM D5185m	>4	**4**	---	---
Nickel	ppm	ASTM D5185m	>2	**<1**	---	---
Titanium	ppm	ASTM D5185m		**0**	---	---
Silver	ppm	ASTM D5185m	>2	**0**	---	---
Aluminum	ppm	ASTM D5185m	>25	**11**	---	---
Lead	ppm	ASTM D5185m	>45	**3**	---	---
Copper	ppm	ASTM D5185m	>85	▲ **89**	---	---
Tin	ppm	ASTM D5185m	>4	**<1**	---	---
Vanadium	ppm	ASTM D5185m		**<1**	---	---
Cadmium	ppm	ASTM D5185m		**0**	---	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**22**	---	---
Barium	ppm	ASTM D5185m	0	**0**	---	---
Molybdenum	ppm	ASTM D5185m	60	**104**	---	---
Manganese	ppm	ASTM D5185m	0	**1**	---	---
Magnesium	ppm	ASTM D5185m	1010	**1309**	---	---
Calcium	ppm	ASTM D5185m	1070	**1665**	---	---
Phosphorus	ppm	ASTM D5185m	1150	**1309**	---	---
Zinc	ppm	ASTM D5185m	1270	**1737**	---	---
Sulfur	ppm	ASTM D5185m	2060	**3646**	---	---

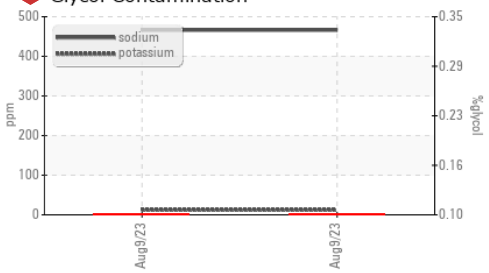
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>30	**18**	---	---
Sodium	ppm	ASTM D5185m		▲ **466**	---	---
Potassium	ppm	ASTM D5185m	>20	▲ **12**	---	---
Glycol	%	*ASTM D2982		● **0.10**	---	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**2.1**	---	---
Nitration	Abs/cm	*ASTM D7624	>20	**17.5**	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	**31.6**	---	---

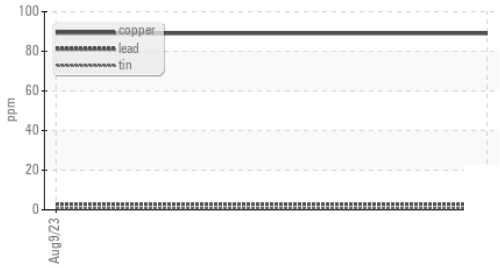
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**28.3**	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**8.6**	---	---

OIL ANALYSIS REPORT

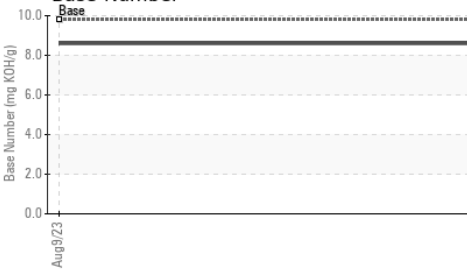
Glycol Contamination



Non-ferrous Metals



Base Number



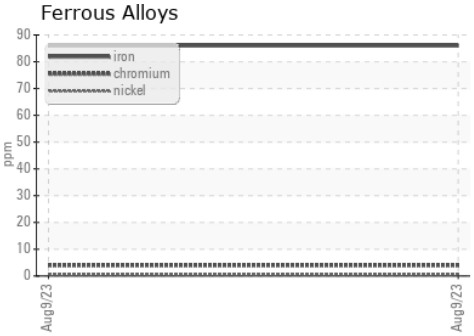
Viscosity @ 100°C

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	---	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	---	---
Precipitate	scalar	*Visual	NONE	**NONE**	---	---
Silt	scalar	*Visual	NONE	**NONE**	---	---
Debris	scalar	*Visual	NONE	**NONE**	---	---
Sand/Dirt	scalar	*Visual	NONE	**NONE**	---	---
Appearance	scalar	*Visual	NORML	**NORML**	---	---
Odor	scalar	*Visual	NORML	**NORML**	---	---
Emulsified Water	scalar	*Visual	>0.2	**NEG**	---	---
Free Water	scalar	*Visual		**NEG**	---	---

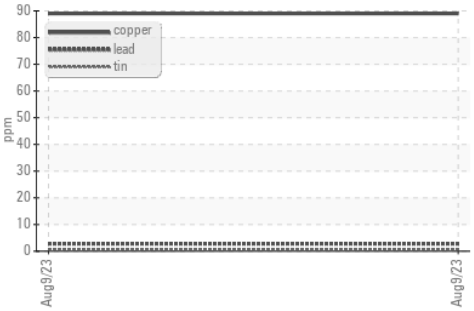
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	**17.1**	---	---

GRAPHS

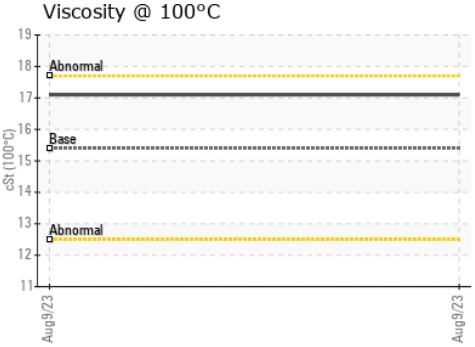
Ferrous Alloys



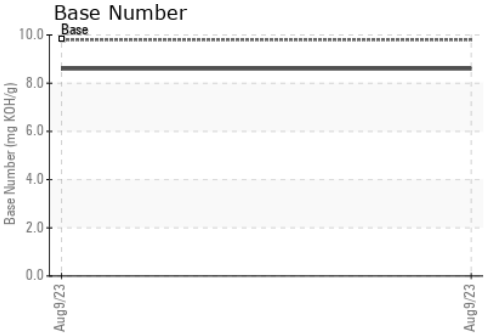
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0066951 **Received** : 29 Aug 2023
Lab Number : 05937027 **Diagnosed** : 04 Sep 2023
Unique Number : 10622298 **Diagnostician** : Doug Bogart
Test Package : FLEET (Additional Tests: Glycol)

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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