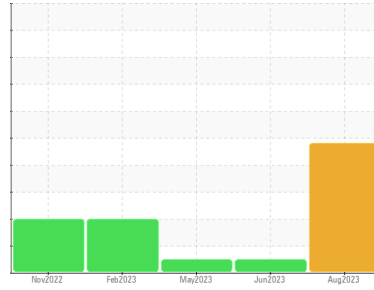




PROBLEM SUMMARY

Sample Rating Trend



GLYCOL



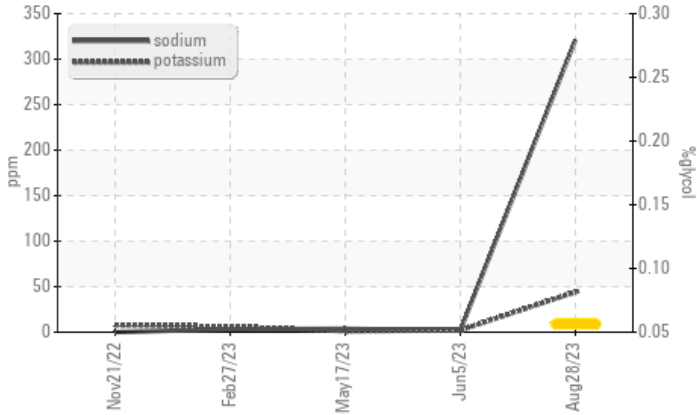
Machine Id
813007

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY

▲ Glycol Contamination



RECOMMENDATION

We advise that you check for the source of the coolant leak. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status			ABNORMAL	NORMAL	NORMAL
Sodium	ppm	ASTM D5185m	▲ 321	2	4
Potassium	ppm	ASTM D5185m >20	▲ 44	2	1
Glycol	%	*ASTM D2982	▲ 0.06	NEG	NEG

Customer Id: GFL657
Sample No.: GFL0058047
Lab Number: 05937040
Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:
Wes Davis +1 905-569-8600 x223
wesd@wearcheck.ca

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

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
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

05 Jun 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



17 May 2023 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. Metal levels are typical for a new component breaking in. 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



27 Feb 2023 Diag: Jonathan Hester

DIRT



Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. Metal levels are typical for a new component breaking in. Elemental level of silicon (Si) above normal indicating ingress of seal material. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

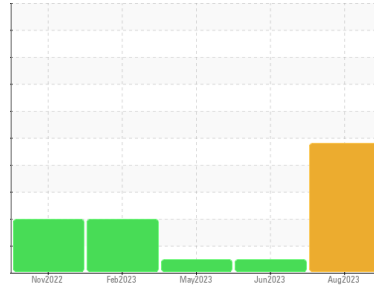
view report





OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id
813007

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check for the source of the coolant leak. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

Test for glycol is positive. There is a moderate 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	GFL0058047	GFL0082536	GFL0070913
Sample Date	Client Info	28 Aug 2023	05 Jun 2023	17 May 2023
Machine Age	hrs	1470	1012	898
Oil Age	hrs	458	570	456
Oil Changed	Client Info	Changed	Changed	Not Changed
Sample Status		ABNORMAL	NORMAL	NORMAL

CONTAMINATION

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

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >100	11	25	21
Chromium	ppm ASTM D5185m >20	<1	<1	1
Nickel	ppm ASTM D5185m >4	0	7	7
Titanium	ppm ASTM D5185m	0	0	0
Silver	ppm ASTM D5185m >3	0	0	0
Aluminum	ppm ASTM D5185m >20	4	<1	0
Lead	ppm ASTM D5185m >40	0	<1	0
Copper	ppm ASTM D5185m >330	2	154	312
Tin	ppm ASTM D5185m >15	<1	2	2
Vanadium	ppm ASTM D5185m	0	0	0
Cadmium	ppm ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	3	8	12
Barium	ppm ASTM D5185m 0	0	2	0
Molybdenum	ppm ASTM D5185m 60	79	68	68
Manganese	ppm ASTM D5185m 0	<1	1	1
Magnesium	ppm ASTM D5185m 1010	1017	899	959
Calcium	ppm ASTM D5185m 1070	1154	1114	1150
Phosphorus	ppm ASTM D5185m 1150	1053	895	978
Zinc	ppm ASTM D5185m 1270	1335	1165	1216
Sulfur	ppm ASTM D5185m 2060	3609	2446	2676

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	11	10	11
Sodium	ppm ASTM D5185m	▲ 321	2	4
Potassium	ppm ASTM D5185m >20	▲ 44	2	1
Glycol	% *ASTM D2982	▲ 0.06	NEG	NEG

INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.5	0.5	0.4
Nitration	Abs/cm *ASTM D7624 >20	9.3	10.2	9.2
Sulfation	Abs/.1mm *ASTM D7415 >30	21.6	21.0	20.8

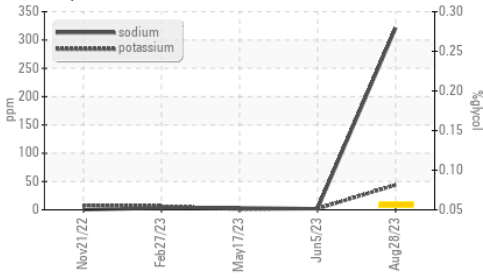
FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	17.0	17.2	17.4
Base Number (BN)	mg KOH/g ASTM D2896 9.8	7.0	7.0	7.2

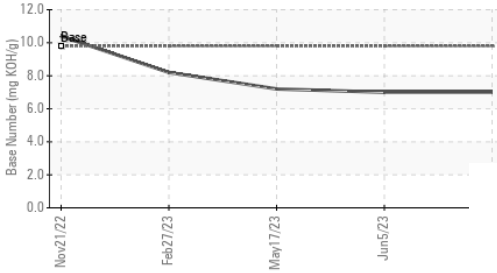


OIL ANALYSIS REPORT

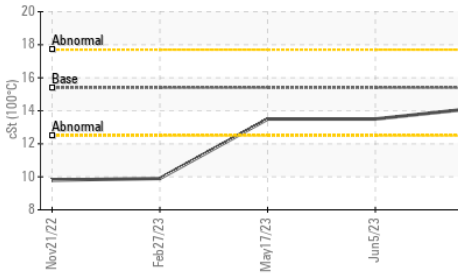
▲ Glycol Contamination



Base Number



Viscosity @ 100°C

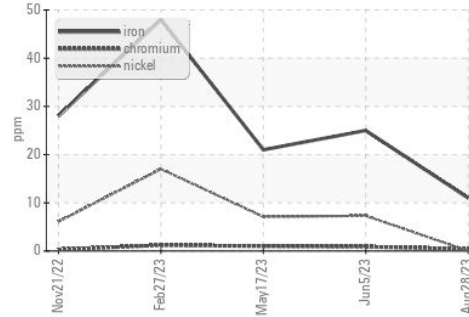


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

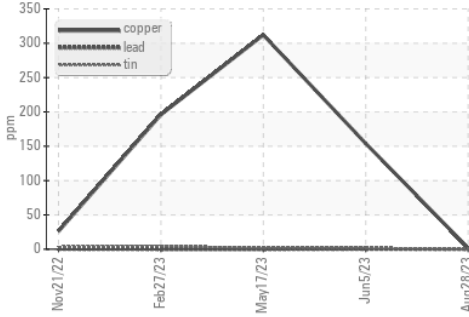
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.2	13.5

GRAPHS

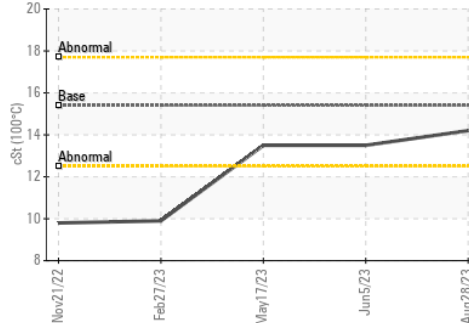
Ferrous Alloys



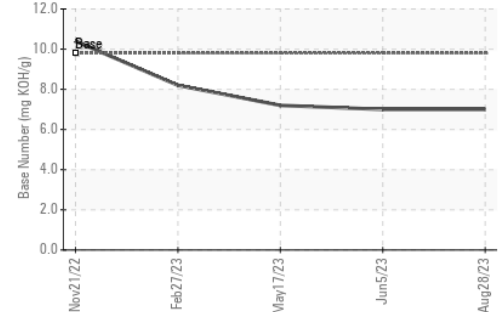
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0058047 **Received** : 29 Aug 2023
Lab Number : 05937040 **Diagnosed** : 01 Sep 2023
Unique Number : 10622311 **Diagnostician** : Wes Davis
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 657 - Charlottesville Hauling
 5498 Richmond Road
 Troy, VA
 US 22974
 Contact: Brian Ulickas
 bulickas@gflenv.com

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)

T:
F: