

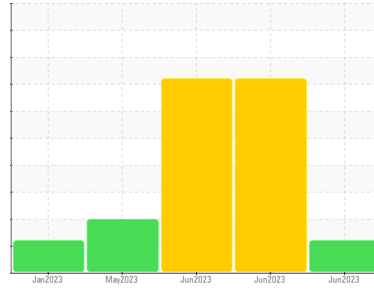


PROBLEM SUMMARY



Machine Id
426100-47
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

Sample Rating Trend

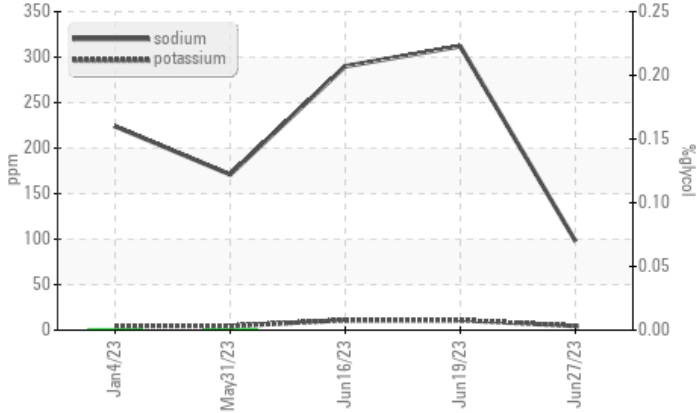


GLYCOL



COMPONENT CONDITION SUMMARY

▲ Glycol Contamination



RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status			ATTENTION	SEVERE	SEVERE
Sodium	ppm	ASTM D5185m	▲ 98	▲ 312	▲ 290

Customer Id: GFL166
 Sample No.: GFL0087850
 Lab Number: 05890012
 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	---	---	?	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.

HISTORICAL DIAGNOSIS

19 Jun 2023 Diag: Jonathan Hester

WEAR



We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. Bearing and/or bushing wear is indicated. Sodium and/or potassium levels remain high. 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](#)



16 Jun 2023 Diag: Jonathan Hester

WEAR



We advise that you check for the source of the coolant leak. Check for low coolant level. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. Bearing and/or bushing wear is indicated. Sodium and/or potassium levels are high. 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.

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31 May 2023 Diag: Don Baldrige

GLYCOL



No corrective action is recommended at this time. We recommend an early resample to monitor this condition. The lead level is abnormal. All other component wear rates are normal. Sodium and/or potassium levels are high. Test for glycol is negative. 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.

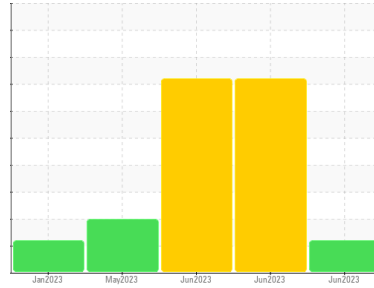
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OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id
426100-47
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

▲ Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Sodium and/or potassium levels remain elevated. Test for glycol is negative.

▲ 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	history 1	history 2
Sample Number	Client Info	GFL0087850	GFL0087809	GFL0081155
Sample Date	Client Info	27 Jun 2023	19 Jun 2023	16 Jun 2023
Machine Age	hrs	36436	36436	36436
Oil Age	hrs	600	1200	600
Oil Changed	Client Info	Changed	Changed	Not Changed
Sample Status		ATTENTION	SEVERE	SEVERE

CONTAMINATION

method	limit/base	current	history 1	history 2
Fuel	WC Method >3.0	<1.0	<1.0	<1.0

WEAR METALS

method	limit/base	current	history 1	history 2
Iron	ppm ASTM D5185m >120	10	47	44
Chromium	ppm ASTM D5185m >20	<1	1	1
Nickel	ppm ASTM D5185m >5	<1	2	2
Titanium	ppm ASTM D5185m >2	0	<1	<1
Silver	ppm ASTM D5185m >2	0	<1	<1
Aluminum	ppm ASTM D5185m >20	<1	2	2
Lead	ppm ASTM D5185m >40	15	154	147
Copper	ppm ASTM D5185m >330	40	145	131
Tin	ppm ASTM D5185m >15	<1	4	3
Vanadium	ppm ASTM D5185m	0	0	0
Cadmium	ppm ASTM D5185m	0	<1	<1

ADDITIVES

method	limit/base	current	history 1	history 2
Boron	ppm ASTM D5185m 0	13	49	57
Barium	ppm ASTM D5185m 0	0	0	0
Molybdenum	ppm ASTM D5185m 60	66	81	80
Manganese	ppm ASTM D5185m 0	<1	1	1
Magnesium	ppm ASTM D5185m 1010	1028	675	676
Calcium	ppm ASTM D5185m 1070	1128	1238	1227
Phosphorus	ppm ASTM D5185m 1150	1134	1063	1066
Zinc	ppm ASTM D5185m 1270	1413	1343	1335
Sulfur	ppm ASTM D5185m 2060	4225	3961	3992

CONTAMINANTS

method	limit/base	current	history 1	history 2
Silicon	ppm ASTM D5185m >25	4	14	14
Sodium	ppm ASTM D5185m	▲ 98	▲ 312	▲ 290
Potassium	ppm ASTM D5185m >20	4	11	11
Glycol	% *ASTM D2982	NEG	NEG	NEG

INFRA-RED

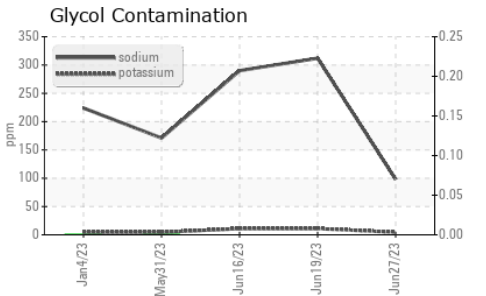
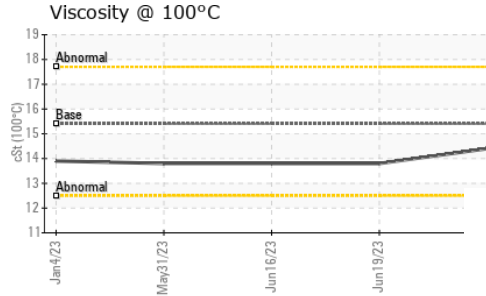
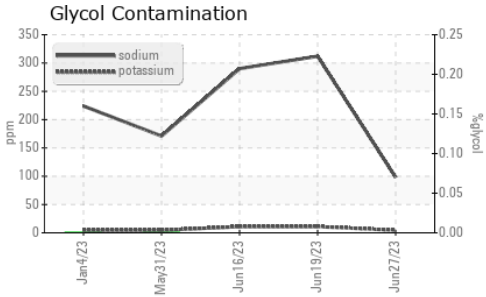
method	limit/base	current	history 1	history 2
Soot %	% *ASTM D7844 >4	0.5	1.9	1.8
Nitration	Abs/cm *ASTM D7624 >20	5.3	8.7	8.5
Sulfation	Abs/.1mm *ASTM D7415 >30	18.9	23.4	23.1

FLUID DEGRADATION

method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm *ASTM D7414 >25	14.5	14.7	14.6
Base Number (BN)	mg KOH/g ASTM D2896 9.8	9.4	9.1	9.3



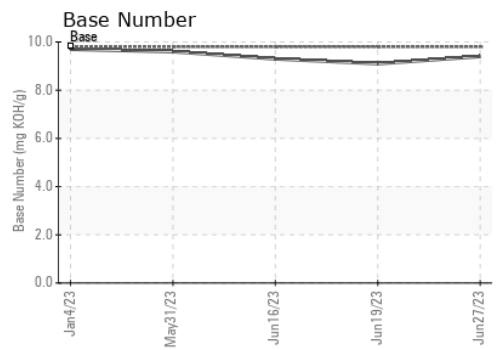
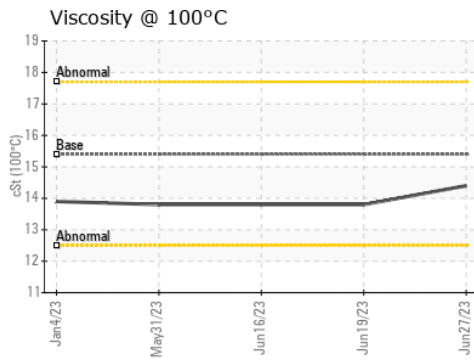
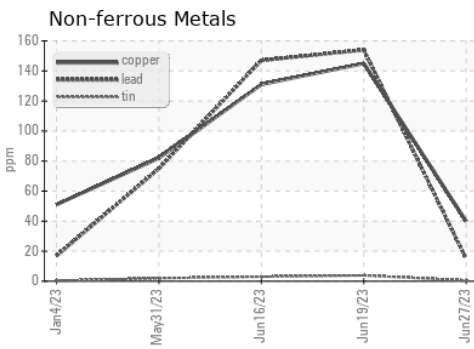
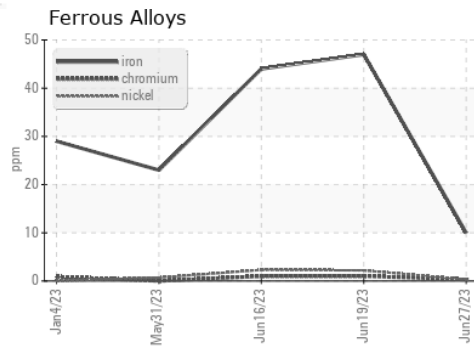
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history 1	history 2
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	history 1	history 2
Visc @ 100°C	cSt	ASTM D445	15.4	14.4	13.8

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0087850 **Received** : 05 Jul 2023
Lab Number : 05890012 **Diagnosed** : 07 Jul 2023
Unique Number : 10545822 **Diagnostician** : Jonathan Hester
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 166 - Phenix City
 18 Old Brickyard Rd
 Phenix City, AL
 US 36869
 Contact: DEAN PEACE JR
 dean.peace@gflenv.com
 T:
 F:

Certificate L2367
 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)