

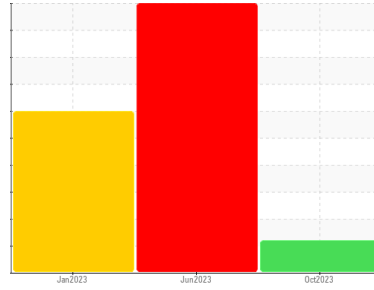


PROBLEM SUMMARY



Machine Id
423078
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

Sample Rating Trend



DEGRADATION



COMPONENT CONDITION SUMMARY

No relevant graphs to display

RECOMMENDATION

The oil is near the end of its useful service life, recommend schedule an oil change. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	SEVERE	SEVERE
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	▲ 3.8	5.9	▲ 19.8

Customer Id: GFL856
 Sample No.: GFL0084605
 Lab Number: 05966840
 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
Service/change Fluid	---	---	?	The oil is near the end of it's useful service life, recommend schedule an oil change.

HISTORICAL DIAGNOSIS

15 Jun 2023 Diag: Jonathan Hester

GLYCOL



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 recommend an early resample to monitor this condition. Piston, ring and cylinder wear is indicated. Sodium and/or potassium levels are high. There is a high concentration of glycol present 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



16 Jan 2023 Diag: Jonathan Hester

WATER



We advise that you check for the source of water entry. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please note that there was too much water present in the oil to perform a viscosity test. Cylinder, crank, or cam shaft wear is indicated. Appearance is milky. There is a high concentration of water present in the oil. The oil is no longer serviceable due to the presence of contaminants.

view report





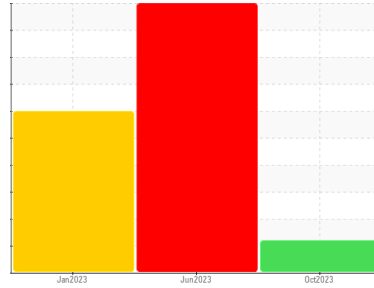
OIL ANALYSIS REPORT

Sample Rating Trend

DEGRADATION



Machine Id
423078
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)



DIAGNOSIS

▲ Recommendation

The oil is near the end of its useful service life, recommend schedule an oil change. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

▲ Fluid Condition

The BN level is low. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0084605	GFL0084727	GFL0068399
Sample Date	Client Info	01 Oct 2023	15 Jun 2023	16 Jan 2023
Machine Age	mls	Client Info	0	154198
Oil Age	mls	Client Info	0	0
Oil Changed	Client Info	N/A	Changed	Changed
Sample Status		ABNORMAL	SEVERE	SEVERE

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 >80	11	145	95
Chromium	ppm ASTM D5185m >5	1	11	1
Nickel	ppm ASTM D5185m >2	0	4	2
Titanium	ppm ASTM D5185m	0	<1	<1
Silver	ppm ASTM D5185m >3	0	0	1
Aluminum	ppm ASTM D5185m >30	0	35	5
Lead	ppm ASTM D5185m >30	18	13	11
Copper	ppm ASTM D5185m >150	3	71	14
Tin	ppm ASTM D5185m >5	<1	<1	3
Vanadium	ppm ASTM D5185m	<1	0	<1
Cadmium	ppm ASTM D5185m	0	0	<1

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	23	13	41
Barium	ppm ASTM D5185m 0	0	0	5
Molybdenum	ppm ASTM D5185m 60	60	200	55
Manganese	ppm ASTM D5185m 0	<1	2	1
Magnesium	ppm ASTM D5185m 1010	681	583	511
Calcium	ppm ASTM D5185m 1070	1844	1867	1517
Phosphorus	ppm ASTM D5185m 1150	861	779	824
Zinc	ppm ASTM D5185m 1270	1095	1098	1045
Sulfur	ppm ASTM D5185m 2060	2569	3205	3253

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >20	5	19	10
Sodium	ppm ASTM D5185m	8	869	17
Potassium	ppm ASTM D5185m >20	0	1085	9
Glycol	% *ASTM D2982	NEG	0.20	NEG

INFRA-RED

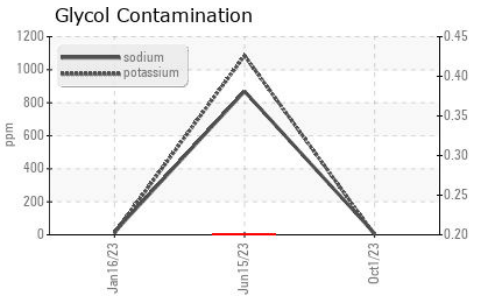
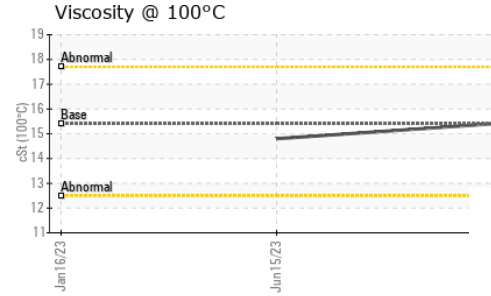
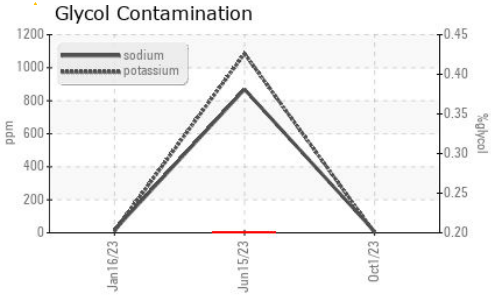
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.1	0.1	0.2
Nitration	Abs/cm *ASTM D7624 >20	13.0	13.6	20.2
Sulfation	Abs/.1mm *ASTM D7415 >30	28.5	28.9	5.3

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	28.1	22.8	20.0
Base Number (BN)	mg KOH/g ASTM D2896 9.8	3.8	5.9	19.8



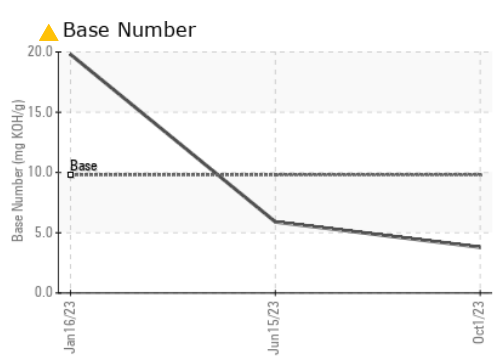
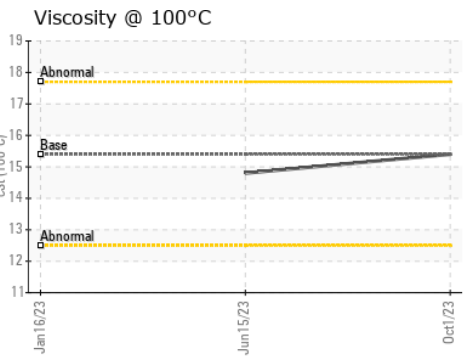
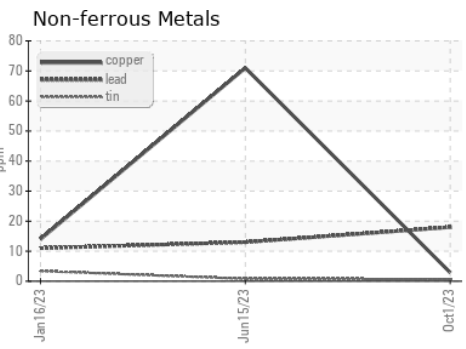
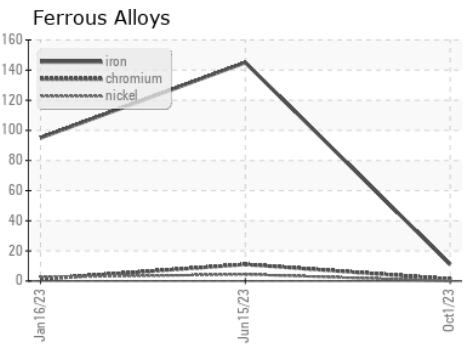
OIL ANALYSIS REPORT



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	▲ MILKY
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	14.8	---

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0084605 **Received** : 02 Oct 2023
Lab Number : 05966840 **Diagnosed** : 04 Oct 2023
Unique Number : 10673391 **Diagnostician** : Jonathan Hester
Test Package : FLEET

GFL Environmental - 856 - Houston South
 8515 Highway 6 South
 Houston, TX
 US 77083
 Contact: Apolinar Zacarias
 pzacariascano@gflenv.com

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)