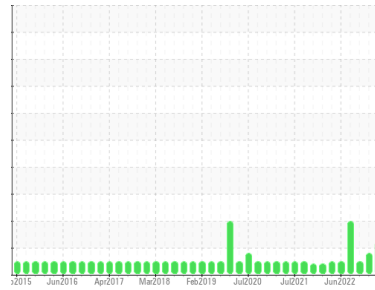




PROBLEM SUMMARY

Sample Rating Trend



DEGRADATION



Machine Id
2339 MACK GRANITE
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (60 QTS)

COMPONENT CONDITION SUMMARY

No relevant graphs to display

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		ABNORMAL	ABNORMAL	NORMAL	
Base Number (BN)	mg KOH/g ASTM D2896	9.8	▲ 1.0	4.2	10.3

Customer Id: GFL001
 Sample No.: GFL0089359
 Lab Number: 05926988
 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Don Baldrige +1
don.b505@comcast.net

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

05 Jun 2023 Diag: Jonathan Hester

SOOT



Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is an abnormal amount of solids and carbon present 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](#)



21 Nov 2022 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](#)



23 Aug 2022 Diag: Don Baldrige

DEGRADATION



We advise that you check for faulty combustion, plugged air filters, or aftercoolers. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is an abnormal amount of solids and carbon present in the oil. The BN level is low. The condition of the oil is acceptable for the time in service.

[view report](#)





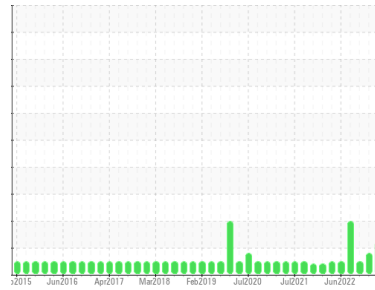
OIL ANALYSIS REPORT

Sample Rating Trend

DEGRADATION



Machine Id
2339 MACK GRANITE
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (60 QTS)



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

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		GFL0089359	GFL0056696	GFL0056556
Sample Date	Client Info		14 Aug 2023	05 Jun 2023	21 Nov 2022
Machine Age	hrs	Client Info	43085	42507	41706
Oil Age	hrs	Client Info	0	1265	464
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			ABNORMAL	ABNORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	<1.0	<1.0
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	44	46	32
Chromium	ppm	ASTM D5185m >20	1	1	<1
Nickel	ppm	ASTM D5185m >5	0	<1	<1
Titanium	ppm	ASTM D5185m >2	<1	0	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >20	1	0	1
Lead	ppm	ASTM D5185m >40	2	1	1
Copper	ppm	ASTM D5185m >330	3	4	7
Tin	ppm	ASTM D5185m >15	<1	<1	<1
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<1	4	30
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 60	57	60	63
Manganese	ppm	ASTM D5185m 0	<1	<1	<1
Magnesium	ppm	ASTM D5185m 1010	931	848	865
Calcium	ppm	ASTM D5185m 1070	1085	1059	1116
Phosphorus	ppm	ASTM D5185m 1150	975	956	921
Zinc	ppm	ASTM D5185m 1270	1200	1164	1153
Sulfur	ppm	ASTM D5185m 2060	3394	3024	3261

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	4	4	4
Sodium	ppm	ASTM D5185m	2	0	2
Potassium	ppm	ASTM D5185m >20	3	2	0

INFRA-RED

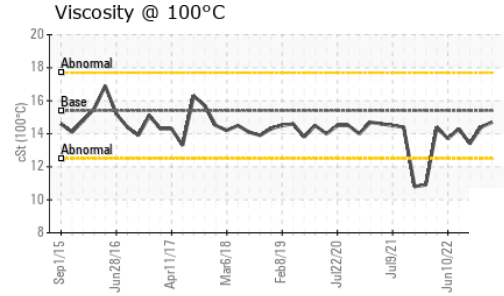
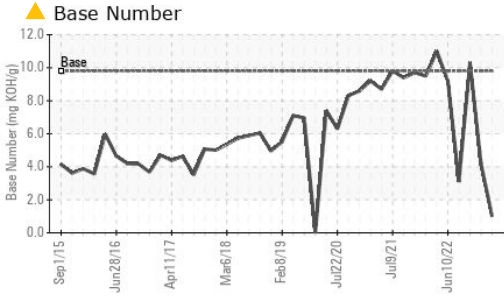
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	3.9	▲ 4.3	1.7
Nitration	Abs/cm	*ASTM D7624 >20	9.7	9.7	7.3
Sulfation	Abs/.1mm	*ASTM D7415 >30	25.1	26.5	21.5

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	15.2	16.5	14.0
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	▲ 1.0	4.2	10.3



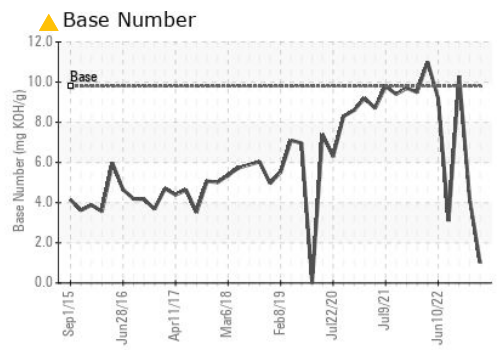
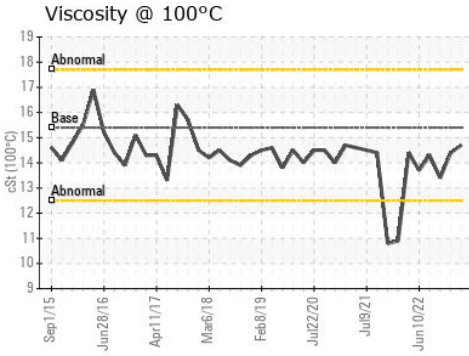
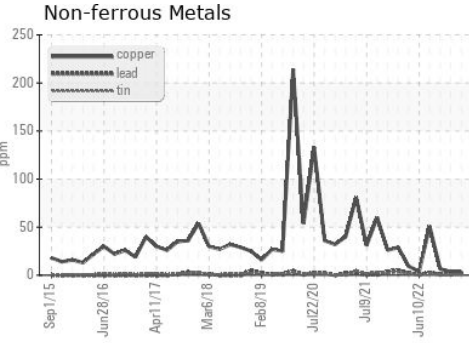
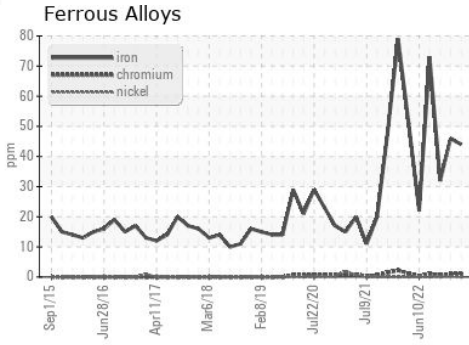
OIL ANALYSIS REPORT



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	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	14.4	13.4

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0089359 **Received** : 17 Aug 2023
Lab Number : **05926988** **Diagnosed** : 18 Aug 2023
Unique Number : 10606935 **Diagnostician** : Don Baldrige
Test Package : FLEET

GFL Environmental - 001 - Raleigh(CNG)
 3741 Conquest Drive
 Garner, NC
 US 27529
 Contact: Craig Johnson
 craig.johnson@gflenv.com
 T: (919)662-7100
 F: (919)662-7130

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)