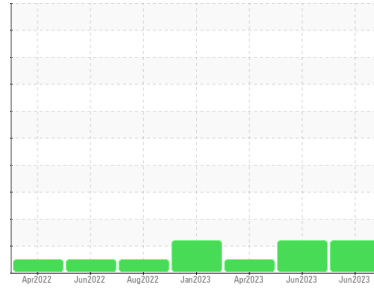




PROBLEM SUMMARY

Sample Rating Trend



DEGRADATION



Machine Id
MACK 732000
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

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	▲ 3.9	▲ 3.2	4.3

Customer Id: GFL331
 Sample No.: GFL0071813
 Lab Number: 05884247
 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.
Other Action (see Note)	DONE	Jun 30 2023	?	No recommended actions

HISTORICAL DIAGNOSIS

14 Jun 2023 Diag: Don Baldrige

DEGRADATION



The oil is near the end of its useful service life, recommend schedule an oil change. 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 level is low. The condition of the oil is acceptable for the time in service.

view report



03 Apr 2023 Diag: Don Baldrige

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 Jan 2023 Diag: Don Baldrige

DEGRADATION



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 no indication of any contamination in the oil. The BN level is low.

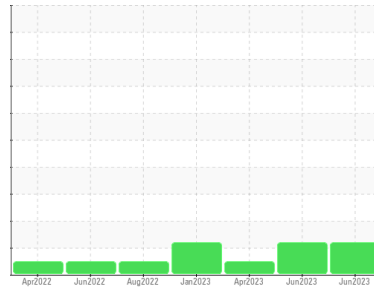
view report





OIL ANALYSIS REPORT

Sample Rating Trend



DEGRADATION



Machine Id
MACK 732000
 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

There is no indication of any contamination in the oil.

▲ Fluid Condition

The BN level is low.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0071813	GFL0071830	GFL0071794
Sample Date	Client Info		22 Jun 2023	14 Jun 2023	03 Apr 2023
Machine Age	hrs	Client Info	3522	3460	2913
Oil Age	hrs	Client Info	1180	1118	571
Oil Changed	Client Info		Changed	Not Changd	Not Changd
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 >75	14	12	9
Chromium	ppm	ASTM D5185m >5	1	0	<1
Nickel	ppm	ASTM D5185m >4	<1	0	<1
Titanium	ppm	ASTM D5185m >2	0	<1	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >15	1	<1	2
Lead	ppm	ASTM D5185m >25	2	0	<1
Copper	ppm	ASTM D5185m >100	2	2	1
Tin	ppm	ASTM D5185m >4	<1	<1	0
Vanadium	ppm	ASTM D5185m	0	<1	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	8	8	8
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 60	66	63	57
Manganese	ppm	ASTM D5185m 0	<1	<1	<1
Magnesium	ppm	ASTM D5185m 1010	622	990	581
Calcium	ppm	ASTM D5185m 1070	1833	1212	1739
Phosphorus	ppm	ASTM D5185m 1150	845	1081	700
Zinc	ppm	ASTM D5185m 1270	1087	1356	1030
Sulfur	ppm	ASTM D5185m 2060	2870	3973	2995

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	5	4	5
Sodium	ppm	ASTM D5185m	7	2	7
Potassium	ppm	ASTM D5185m >20	6	2	2

INFRA-RED

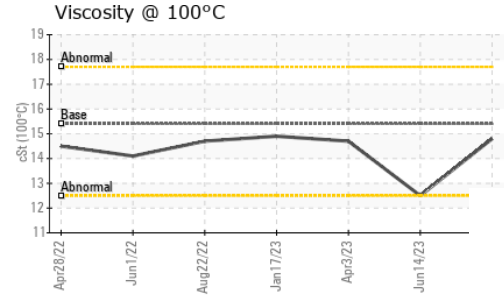
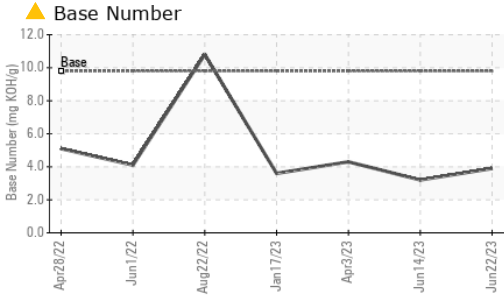
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >6	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	12.0	12.1	11.7
Sulfation	Abs/.1mm	*ASTM D7415 >30	27.1	27.4	22.8

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	23.2	23.9	18.8
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	▲ 3.9	▲ 3.2	4.3



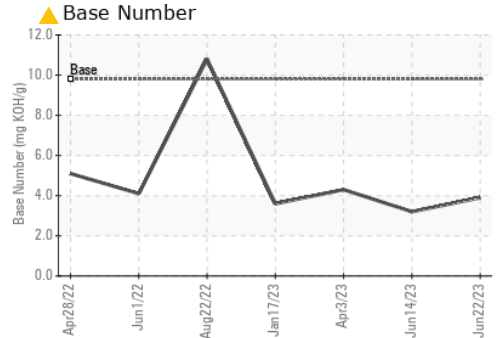
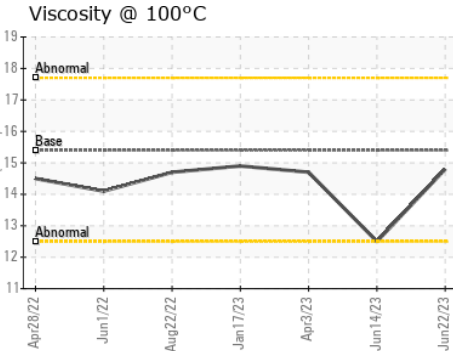
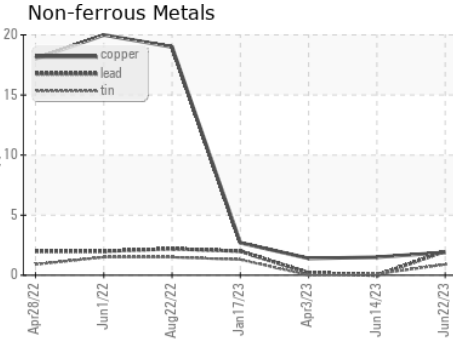
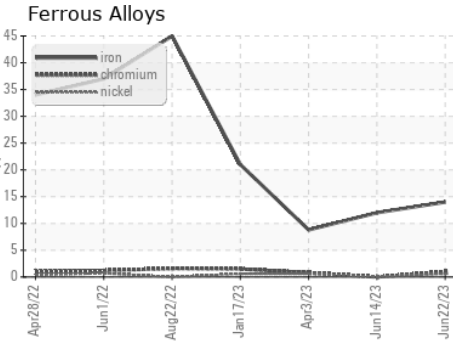
OIL ANALYSIS REPORT



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	14.8	12.5	14.7

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0071813 **Received** : 27 Jun 2023
Lab Number : **05884247** **Diagnosed** : 29 Jun 2023
Unique Number : 10534730 **Diagnostician** : Jonathan Hester
Test Package : FLEET

GFL Environmental - 331 - Columbus
 180 Ada Moore Rd
 Columbus, NC
 US 28722
 Contact: Matt Segars
 matt.segars@gflenv.com
 T: (800)207-6618
 F: (252)617-2494

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)