



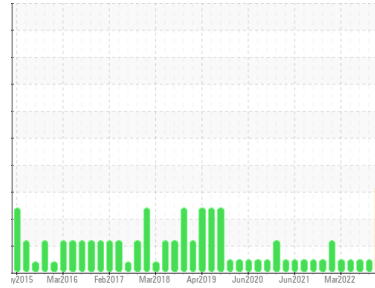
PROBLEM SUMMARY

Sample Rating Trend

GLYCOL

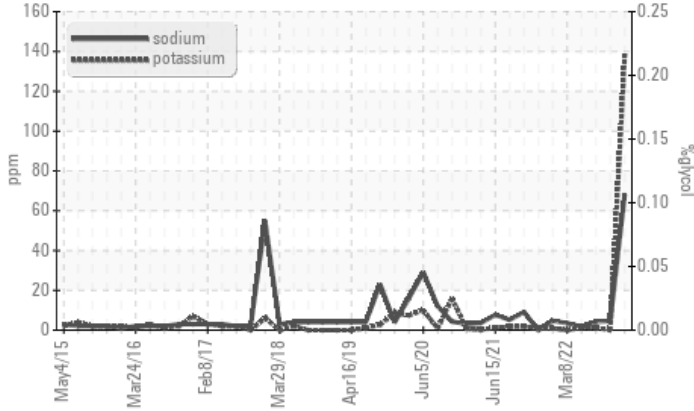


Machine Id
2421 MACK GU713
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (48 GAL)

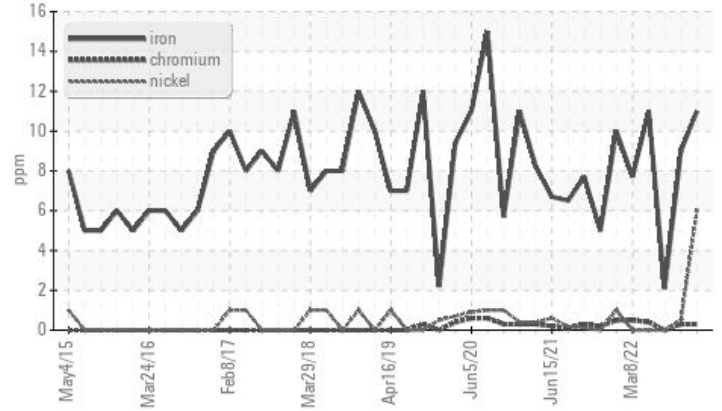


COMPONENT CONDITION SUMMARY

▲ Glycol Contamination



▲ Ferrous Alloys



RECOMMENDATION

We advise that you check for possible coolant leak. Check for low coolant level. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please note that this is a corrected copy for data entry update for time on oil.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	NORMAL	NORMAL
Nickel	ppm	ASTM D5185m	>5	▲ 6	<1	0
Sodium	ppm	ASTM D5185m		▲ 68	5	4
Potassium	ppm	ASTM D5185m	>20	▲ 137	0	1

Customer Id: GFL001
Sample No.: GFL0094723
Lab Number: 06016250
Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:
Doug Bogart +1 (800)237-1369 x4016
dougb@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
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

13 Jul 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



27 May 2022 Diag: Jonathan Hester

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



18 Apr 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





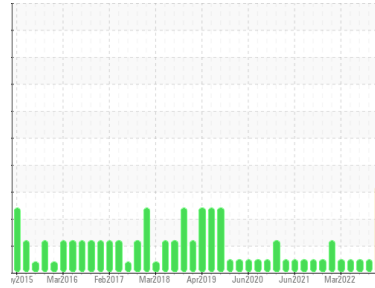
OIL ANALYSIS REPORT

Sample Rating Trend

GLYCOL



Machine Id
2421 MACK GU713
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (48 GAL)



DIAGNOSIS

▲ Recommendation

We advise that you check for possible coolant leak. Check for low coolant level. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please note that this is a corrected copy for data entry update for time on oil.

▲ Wear

Valve wear is indicated.

▲ Contamination

Sodium and/or potassium levels are high. Test for glycol is negative.

▲ Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0094723	GFL0052413	GFL0052395
Sample Date	Client Info		22 Nov 2023	13 Jul 2022	27 May 2022
Machine Age	hrs	Client Info	27838	26119	25811
Oil Age	hrs	Client Info	300	623	304
Oil Changed	Client Info		Changed	Changed	Not Changed
Sample Status			ABNORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	<1.0	<1.0
Water	WC Method	>0.2	NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	11	9	2
Chromium	ppm	ASTM D5185m >20	<1	<1	0
Nickel	ppm	ASTM D5185m >5	▲ 6	<1	0
Titanium	ppm	ASTM D5185m >2	<1	0	0
Silver	ppm	ASTM D5185m >2	0	<1	<1
Aluminum	ppm	ASTM D5185m >20	5	2	1
Lead	ppm	ASTM D5185m >40	<1	<1	<1
Copper	ppm	ASTM D5185m >330	85	<1	<1
Tin	ppm	ASTM D5185m >15	2	1	<1
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	1	3	53
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 60	63	56	48
Manganese	ppm	ASTM D5185m 0	<1	<1	<1
Magnesium	ppm	ASTM D5185m 1010	881	886	556
Calcium	ppm	ASTM D5185m 1070	1072	1111	1419
Phosphorus	ppm	ASTM D5185m 1150	895	906	741
Zinc	ppm	ASTM D5185m 1270	1151	1169	906
Sulfur	ppm	ASTM D5185m 2060	2952	3438	2430

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	11	3	6
Sodium	ppm	ASTM D5185m	▲ 68	5	4
Potassium	ppm	ASTM D5185m >20	▲ 137	0	1
Glycol	%	*ASTM D2982	NEG	NEG	NEG

INFRA-RED

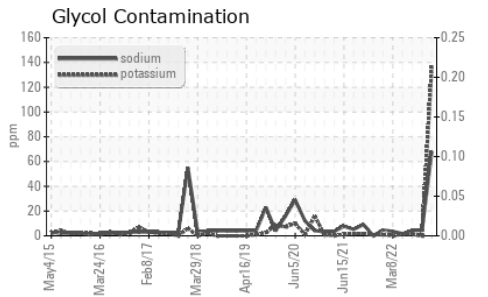
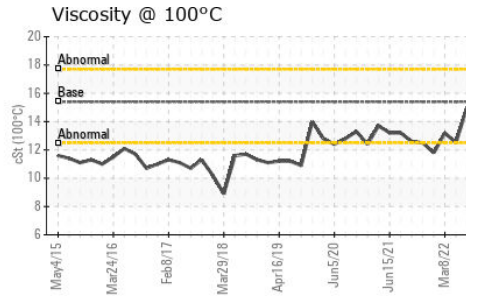
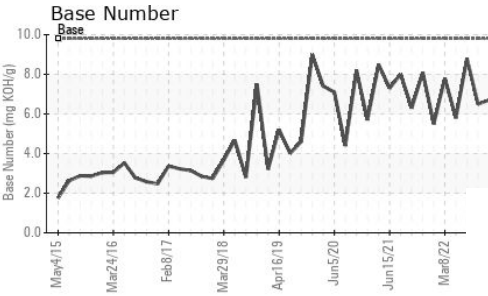
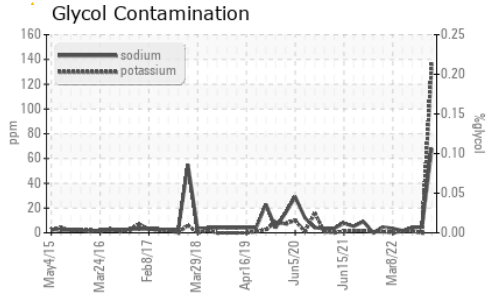
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	0.6	0.4	0.1
Nitration	Abs/cm	*ASTM D7624 >20	9.1	10.5	5.7
Sulfation	Abs/.1mm	*ASTM D7415 >30	20.7	22.3	18.4

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	16.4	18.2	14.6
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	6.7	6.5	8.8



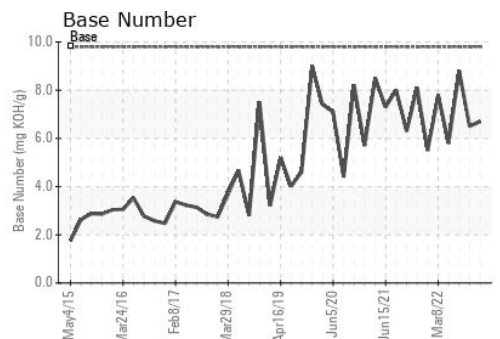
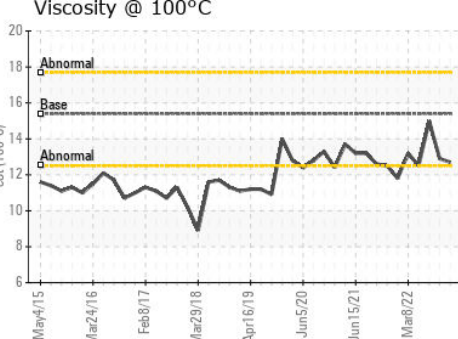
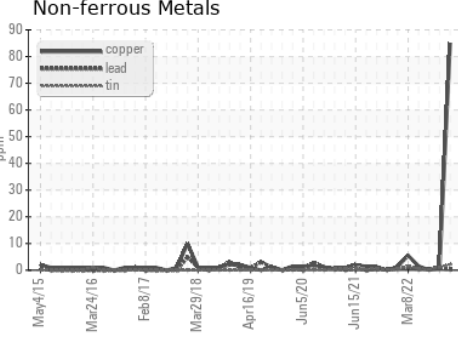
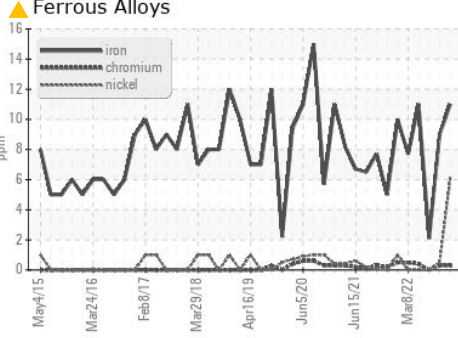
OIL ANALYSIS REPORT



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	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	12.7	12.9

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0094723 **Received** : 24 Nov 2023
Lab Number : 06016250 **Diagnosed** : 28 Nov 2023
Unique Number : 10755394 **Diagnostician** : Doug Bogart
Test Package : FLEET (Additional Tests: Glycol)

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)