



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Machine Id
2413 MACK GU713
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (42 QTS)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor. (Customer Sample Comment: This vehicle is a requested re-sample.)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0117448	GFL0103218	GFL0094681
Sample Date		Client Info		15 Apr 2024	10 Jan 2024	03 Oct 2023
Machine Age	hrs	Client Info		29488	29144	28502
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Changed	Changed
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	3	7	5
Chromium	ppm	ASTM D5185m	>20	<1	<1	0
Nickel	ppm	ASTM D5185m	>5	0	<1	0
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	2	2
Lead	ppm	ASTM D5185m	>40	0	2	<1
Copper	ppm	ASTM D5185m	>330	0	2	2
Tin	ppm	ASTM D5185m	>15	<1	1	<1
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

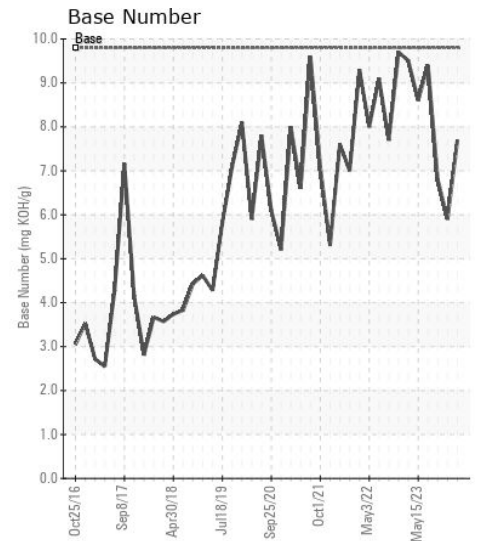
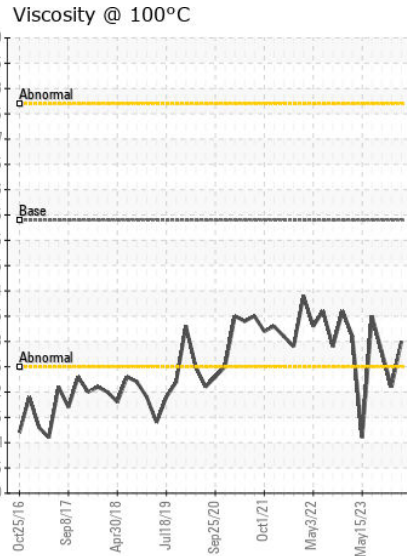
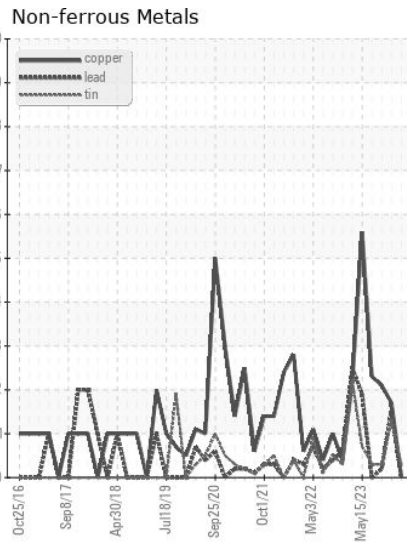
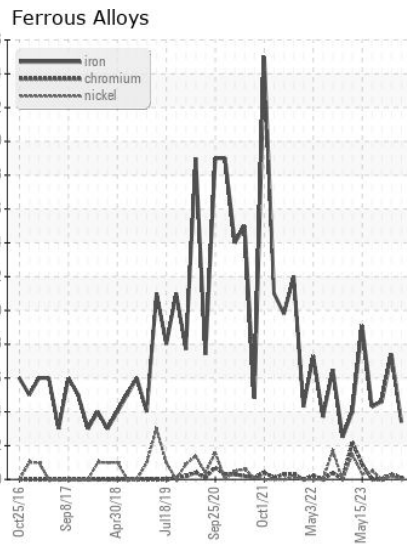
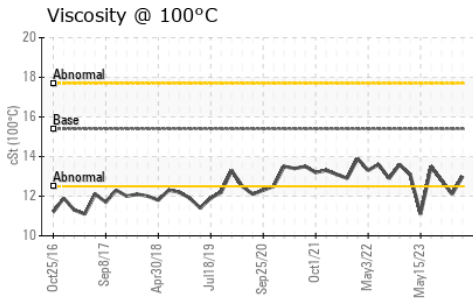
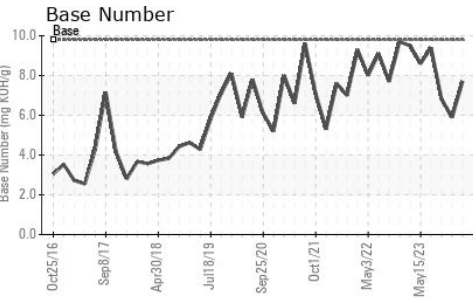
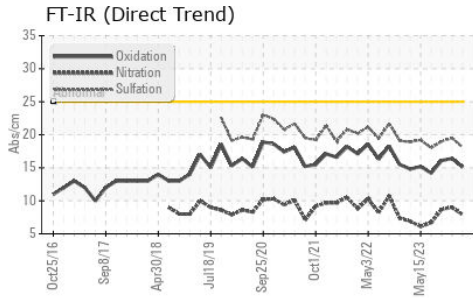
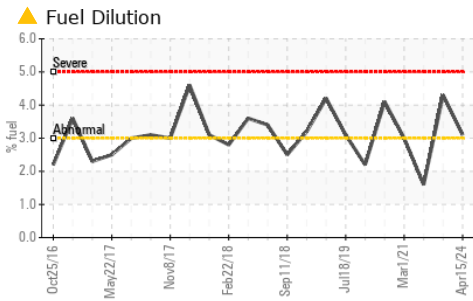
Light fuel dilution occurring.

Silicon	ppm	ASTM D5185m	>25	7	5	4
Potassium	ppm	ASTM D5185m	>20	0	0	1
Fuel	%	ASTM D3524	>3.0	▲ 3.1	▲ 4.3	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>4	0.2	0.3	0.2
Nitration	Abs/cm	*ASTM D7624	>20	7.9	9.0	8.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.1	19.5	19.0
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<1	3	5
Boron	ppm	ASTM D5185m	0	9	1	0
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	57	61	62
Manganese	ppm	ASTM D5185m	0	0	<1	<1
Magnesium	ppm	ASTM D5185m	1010	895	1011	1039
Calcium	ppm	ASTM D5185m	1070	1112	1145	1169
Phosphorus	ppm	ASTM D5185m	1150	1000	1038	1077
Zinc	ppm	ASTM D5185m	1270	1199	1329	1331
Sulfur	ppm	ASTM D5185m	2060	3379	3406	3100
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.1	16.4	16.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.7	5.9	6.8
Visc @ 100°C	cSt	ASTM D445	15.4	13.0	▲ 12.1	12.8



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0117448 **Received** : 17 Apr 2024
Lab Number : 06151688 **Tested** : 22 Apr 2024
Unique Number : 10981766 **Diagnosed** : 22 Apr 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: PercentFuel)

GFL Environmental - 001 - Raleigh(CNG)

3741 Conquest Drive
 Garner, NC
 US 27529

Contact: Craig Johnson
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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)