



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Machine Id
2443 MACK CV713
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (48 QTS)

RECOMMENDATION

We advise that you check for faulty combustion, plugged air filters, or aftercoolers. We recommend you service the filters on this component. Resample at the next service interval to monitor. NOTE: High solids (carbon/soot) in the sample have limited the accuracy of Infra-Red data including Total Base Number (TBN) value.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0117478	GFL0103253	GFL0103245
Sample Date		Client Info		17 Apr 2024	03 Jan 2024	21 Dec 2023
Machine Age	hrs	Client Info		44374	43744	43680
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Not Changd	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	58	58	54
Chromium	ppm	ASTM D5185m	>20	2	2	1
Nickel	ppm	ASTM D5185m	>5	<1	<1	0
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	2	2
Lead	ppm	ASTM D5185m	>40	3	2	2
Copper	ppm	ASTM D5185m	>330	14	7	7
Tin	ppm	ASTM D5185m	>15	2	2	1
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

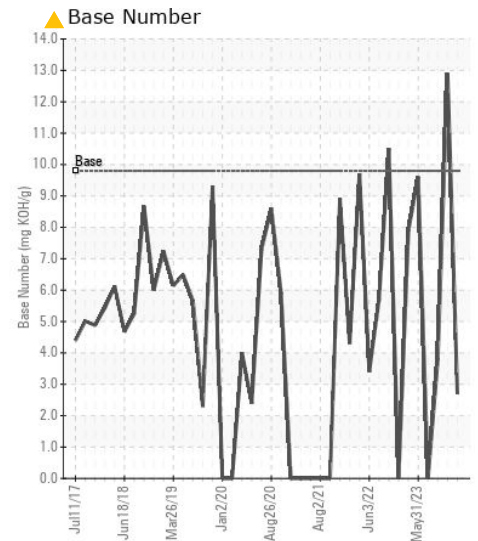
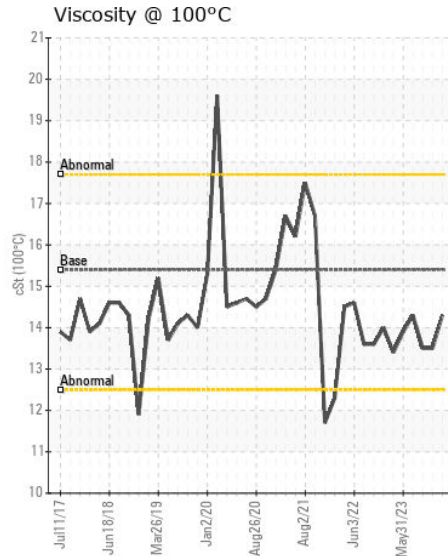
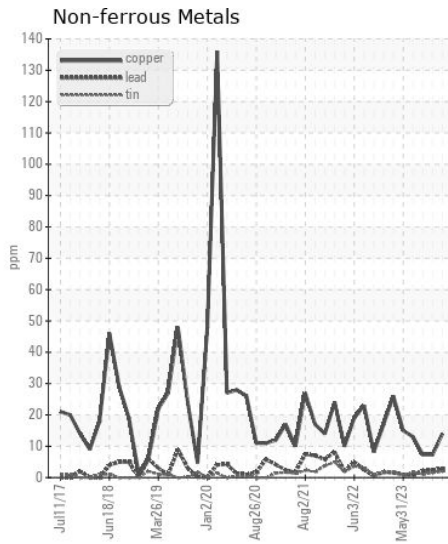
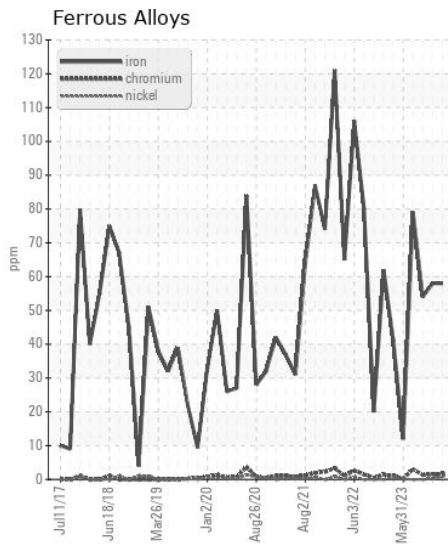
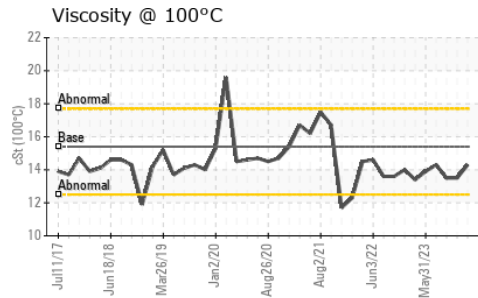
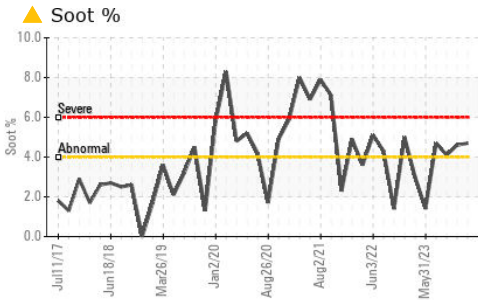
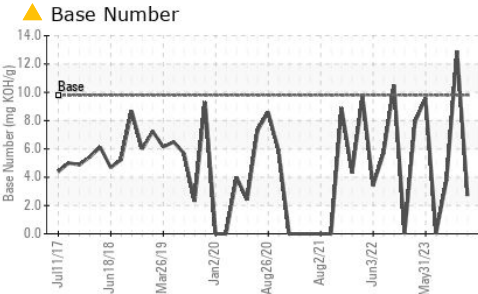
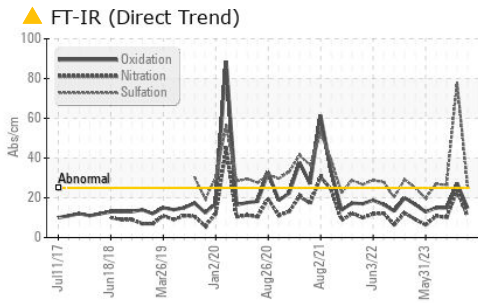
There is an abnormal amount of solids and carbon present in the oil.

Silicon	ppm	ASTM D5185m	>25	7	6	6
Potassium	ppm	ASTM D5185m	>20	2	1	0
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>4	4.7	4.6	4.1
Nitration	Abs/cm	*ASTM D7624	>20	10.8	23.7	10.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.3	77.9	26.5
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 level is low.

Sodium	ppm	ASTM D5185m		2	2	2
Boron	ppm	ASTM D5185m	0	1	3	<1
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	59	54	53
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	893	868	878
Calcium	ppm	ASTM D5185m	1070	1063	964	968
Phosphorus	ppm	ASTM D5185m	1150	1060	969	990
Zinc	ppm	ASTM D5185m	1270	1204	1169	1164
Sulfur	ppm	ASTM D5185m	2060	3301	2771	2824
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.8	27.3	14.9
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	2.7	12.9	3.8
Visc @ 100°C	cSt	ASTM D445	15.4	14.3	13.5	13.5



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0117478
Lab Number : 06155075
Unique Number : 10990498
Test Package : FLEET

Received : 19 Apr 2024
Tested : 24 Apr 2024
Diagnosed : 24 Apr 2024 - Jonathan Hester

GFL Environmental - 001 - Raleigh(CNG)
 3741 Conquest Drive
 Garner, NC
 US 27529

Contact: Craig Johnson
 craig.johnson@gflenv.com

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)

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