



Area

(YA133453) [B Service]

Machine Id

3689C

Component

Natural Gas Engine

Fluid

PETRO CANADA DURON GEO LD 15W40 (38 QTS)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0124484	GFL0111058	GFL0098522
Sample Date		Client Info		08 Jul 2024	06 Mar 2024	10 Jan 2024
Machine Age	hrs	Client Info		20929	19762	19672
Oil Age	hrs	Client Info		1167	1145	808
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Not Changd
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				ABNORMAL	ABNORMAL	NORMAL

WEAR

The chromium level is abnormal. The aluminum level is abnormal.

Iron	ppm	ASTM D5185m	>50	37	45	22
Chromium	ppm	ASTM D5185m	>4	▲ 7	▲ 8	4
Nickel	ppm	ASTM D5185m	>2	2	2	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	▲ 12	▲ 16	9
Lead	ppm	ASTM D5185m	>30	2	<1	<1
Copper	ppm	ASTM D5185m	>35	2	<1	1
Tin	ppm	ASTM D5185m	>4	1	1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

There is no indication of any contamination in the oil.

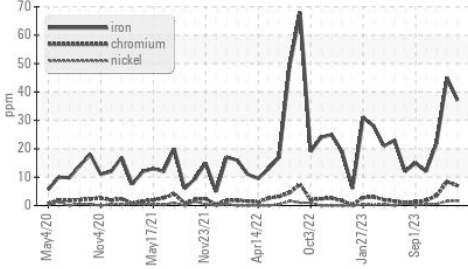
Silicon	ppm	ASTM D5185m	>+100	6	8	6
Potassium	ppm	ASTM D5185m	>20	3	3	3
Water		WC Method	>0.1	NEG	NEG	NEG
Soot %	%	*ASTM D7844		0	0.1	0
Nitration	Abs/cm	*ASTM D7624	>20	11.8	12.1	10.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	27.6	25.1	22.3
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	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	>0.1	NEG	NEG	NEG

FLUID CONDITION

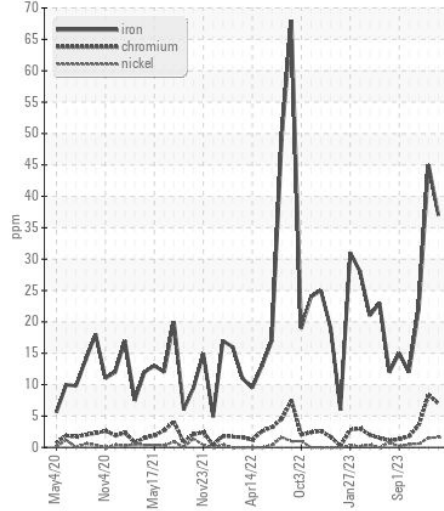
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		7	8	4
Boron	ppm	ASTM D5185m	50	3	5	4
Barium	ppm	ASTM D5185m	5	0	0	0
Molybdenum	ppm	ASTM D5185m	50	60	54	51
Manganese	ppm	ASTM D5185m	0	1	2	<1
Magnesium	ppm	ASTM D5185m	560	600	566	502
Calcium	ppm	ASTM D5185m	1510	1760	1556	1460
Phosphorus	ppm	ASTM D5185m	780	777	783	694
Zinc	ppm	ASTM D5185m	870	1018	967	883
Sulfur	ppm	ASTM D5185m	2040	2533	2348	2418
Oxidation	Abs/.1mm	*ASTM D7414	>25	22.4	20.2	18.2
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	3.1	3.6	3.5
Visc @ 100°C	cSt	ASTM D445	15.1	14.0	14.1	14.4

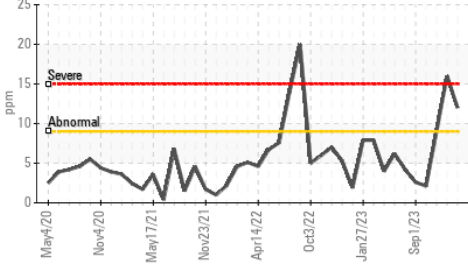
▲ Ferrous Alloys



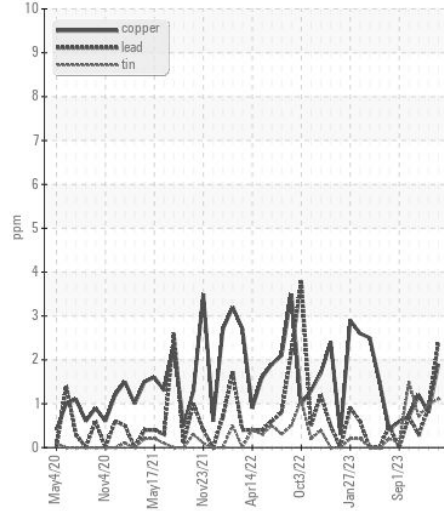
▲ Ferrous Alloys



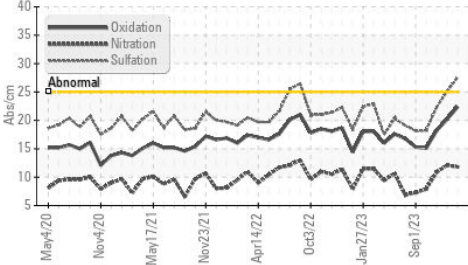
▲ Aluminum (ppm)



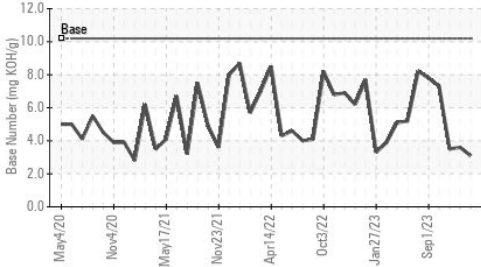
Non-ferrous Metals



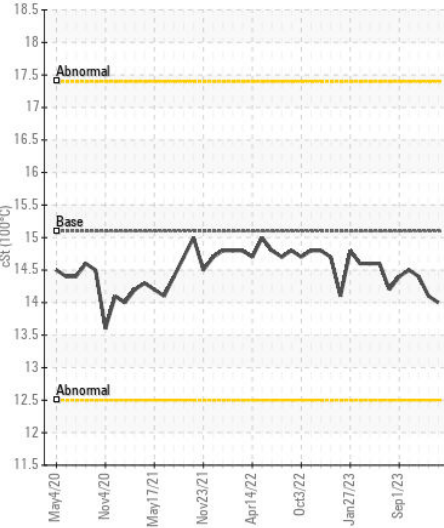
FT-IR (Direct Trend)



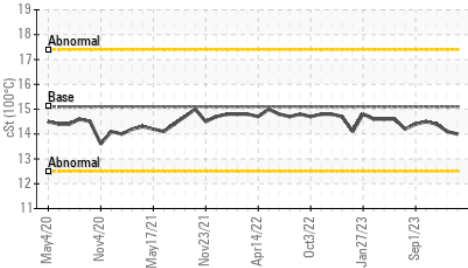
Base Number



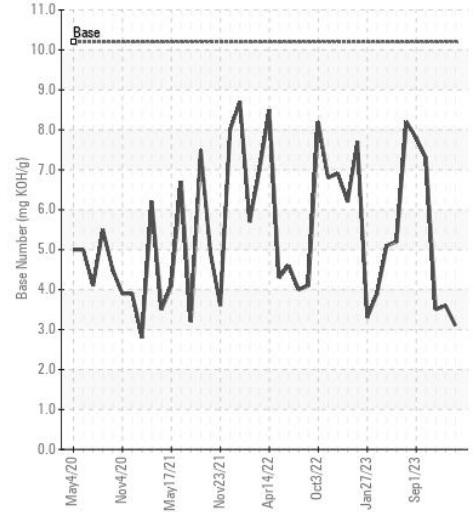
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : GFL0124484

Lab Number : 06232148

Unique Number : 11115641

Test Package : FLEET

Received : 10 Jul 2024

Tested : 11 Jul 2024

Diagnosed : 11 Jul 2024 - Don Baldridge

GFL Environmental - 006 - Wilmington

3618 US Highway 421 N

Wilmington, NC

US 28401

Contact: Eric Wood

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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)