



WEAR

ABNORMAL

CONTAMINATION

NORMAL

FLUID CONDITION

NORMAL

Area

(YA133459)

Machine Id

10643C

Component

Natural Gas Engine

Fluid

PETRO CANADA DURON GEO LD 15W40 (32 QTS)

RECOMMENDATION

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		GFL0111034	GFL0111059	GFL0098537
Sample Date		Client Info		08 May 2024	06 Mar 2024	21 Oct 2023
Machine Age	hrs	Client Info		19129	18534	17801
Oil Age	hrs	Client Info		1328	733	1646
Filter Age	hrs	Client Info		0	733	0
Oil Changed		Client Info		Not Changd	Not Changd	Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				ABNORMAL	NORMAL	ABNORMAL

WEAR

The iron level is abnormal. The chromium level is abnormal.

Iron	ppm	ASTM D5185m	>50	▲ 53	41	41
Chromium	ppm	ASTM D5185m	>4	▲ 7	5	5
Nickel	ppm	ASTM D5185m	>2	1	1	<1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	6	6	5
Lead	ppm	ASTM D5185m	>30	5	4	6
Copper	ppm	ASTM D5185m	>35	22	22	▲ 46
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.

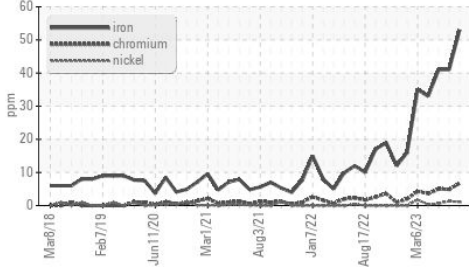
Silicon	ppm	ASTM D5185m	>+100	7	5	6
Potassium	ppm	ASTM D5185m	>20	5	6	10
Water		WC Method	>0.1	NEG	NEG	NEG
Soot %	%	*ASTM D7844		0	0	0
Nitration	Abs/cm	*ASTM D7624	>20	11.6	11.0	11.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.7	22.1	24.4
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	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

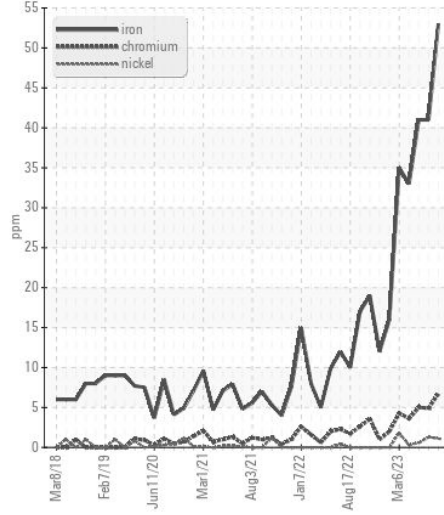
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		6	6	9
Boron	ppm	ASTM D5185m	50	6	13	0
Barium	ppm	ASTM D5185m	5	0	0	0
Molybdenum	ppm	ASTM D5185m	50	60	54	55
Manganese	ppm	ASTM D5185m	0	1	1	1
Magnesium	ppm	ASTM D5185m	560	559	574	573
Calcium	ppm	ASTM D5185m	1510	1639	1590	1578
Phosphorus	ppm	ASTM D5185m	780	754	752	708
Zinc	ppm	ASTM D5185m	870	972	1010	940
Sulfur	ppm	ASTM D5185m	2040	2430	2361	2206
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.8	18.6	20.7
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	3.8	4.9	3.5
Visc @ 100°C	cSt	ASTM D445	15.1	14.5	14.6	14.4

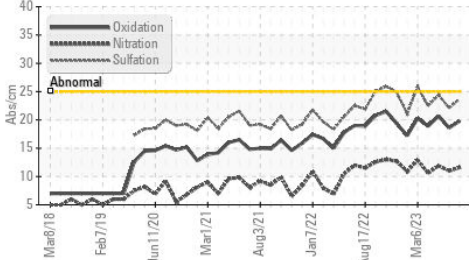
▲ Ferrous Alloys



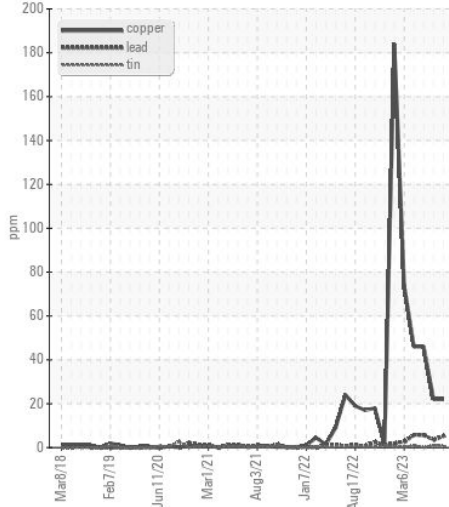
▲ Ferrous Alloys



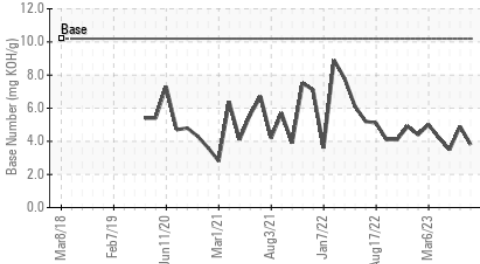
FT-IR (Direct Trend)



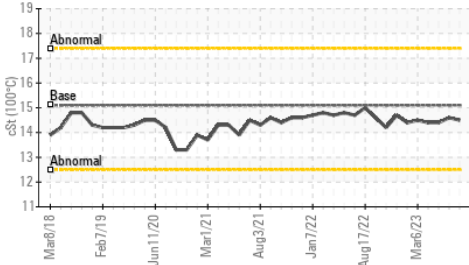
Non-ferrous Metals



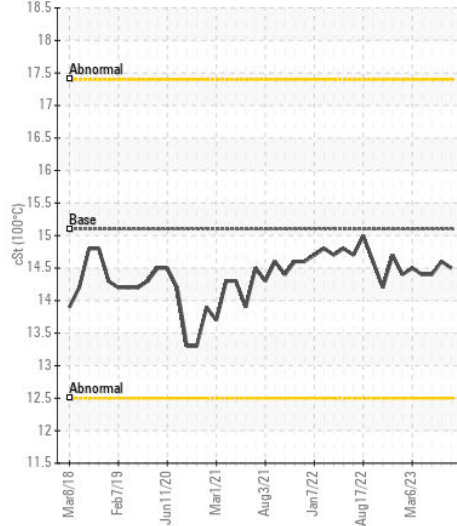
Base Number



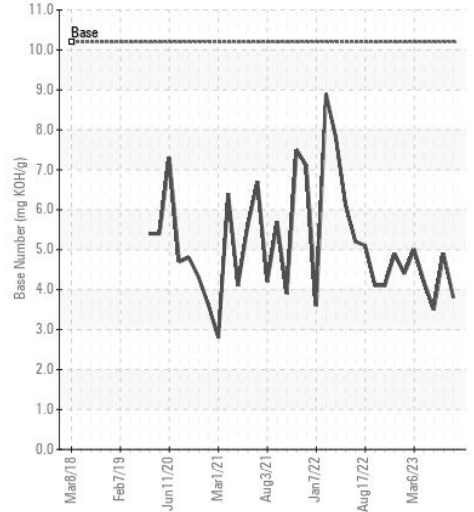
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0111034
Lab Number : 06174931
Unique Number : 11020984
Test Package : FLEET

Received : 09 May 2024
Tested : 10 May 2024
Diagnosed : 13 May 2024 - Sean Felton

GFL Environmental - 006 - Wilmington
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 Wilmington, NC
 US 28401
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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)