



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
948012-205266
 Component
Natural Gas Engine
 Fluid
PETRO CANADA DURON GEO LD 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0121863	GFL0092070	GFL0084628
Sample Date		Client Info		27 May 2024	02 Dec 2023	30 Nov 2023
Machine Age	hrs	Client Info		398	146880	1658
Oil Age	hrs	Client Info		43063	43063	600
Filter Age	hrs	Client Info		43063	600	600
Oil Changed		Client Info		Changed	Not Changd	Changed
Filter Changed		Client Info		Changed	Not Changd	Changed
Sample Status				NORMAL	NORMAL	ATTENTION

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>50	28	3	15
Chromium	ppm	ASTM D5185m	>4	3	<1	1
Nickel	ppm	ASTM D5185m	>2	<1	0	<1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	4	1	4
Lead	ppm	ASTM D5185m	>30	<1	0	<1
Copper	ppm	ASTM D5185m	>35	1	0	<1
Tin	ppm	ASTM D5185m	>4	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
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.

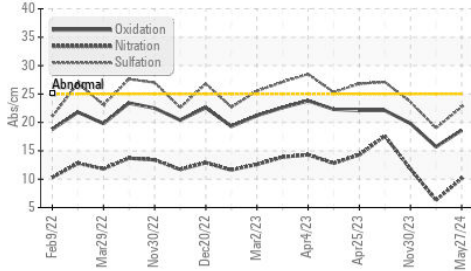
Silicon	ppm	ASTM D5185m	>+100	16	3	5
Potassium	ppm	ASTM D5185m	>20	4	3	16
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		---	---	---
Soot %	%	*ASTM D7844		0.1	0	0
Nitration	Abs/cm	*ASTM D7624	>20	10.1	6.3	11.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.7	19.0	23.6
Silt	scalar	*Visual	NONE	NONE	NONE	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

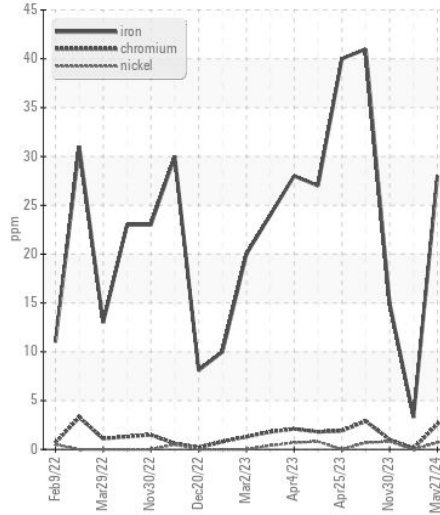
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		30	12	101
Boron	ppm	ASTM D5185m	50	5	44	6
Barium	ppm	ASTM D5185m	5	<1	2	0
Molybdenum	ppm	ASTM D5185m	50	60	48	58
Manganese	ppm	ASTM D5185m	0	<1	0	<1
Magnesium	ppm	ASTM D5185m	560	602	496	611
Calcium	ppm	ASTM D5185m	1510	1733	1441	1659
Phosphorus	ppm	ASTM D5185m	780	851	706	749
Zinc	ppm	ASTM D5185m	870	1036	845	1048
Sulfur	ppm	ASTM D5185m	2040	2811	2370	2605
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.6	15.7	19.8
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	5.1	8.3	3.9
Visc @ 100°C	cSt	ASTM D445	15.1	15.0	14.4	15.3

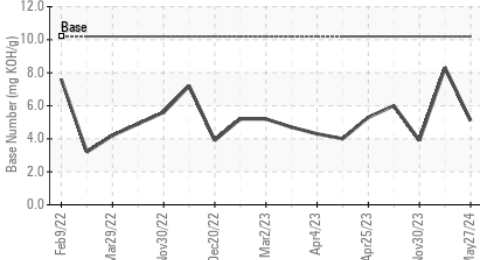
FT-IR (Direct Trend)



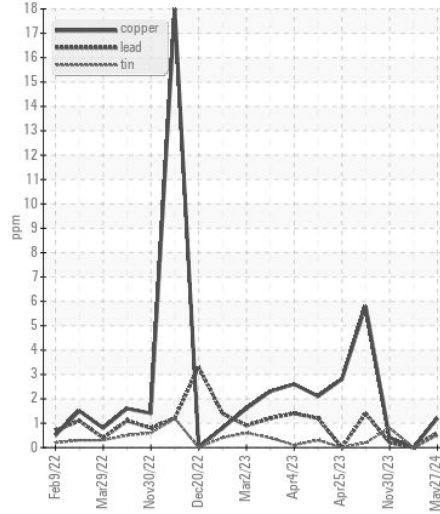
Ferrous Alloys



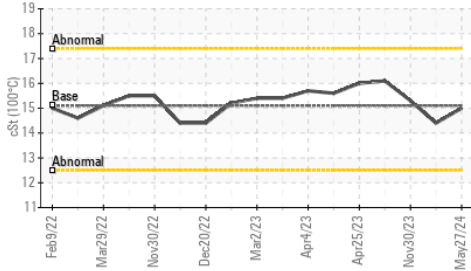
Base Number



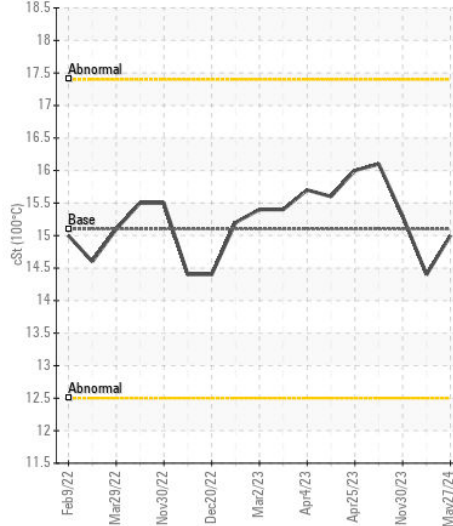
Non-ferrous Metals



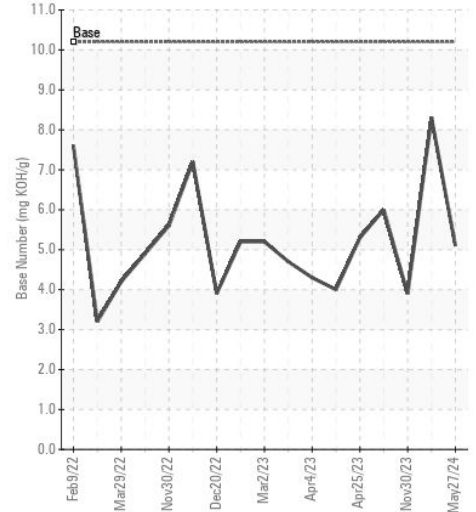
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0121863
Lab Number : 06196293
Unique Number : 11058416
Test Package : FLEET

Received : 31 May 2024
Tested : 03 Jun 2024
Diagnosed : 03 Jun 2024 - Wes Davis

GFL Environmental - 856 - Houston South
 8515 Highway 6 South
 Houston, TX
 US 77083
 Contact: Apolinar Zacarias
 pzacariascano@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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F: