



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
946027-260305
 Component
Natural Gas Engine
 Fluid
PETRO CANADA DURON GEO LD 15W40 (28 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0121768	GFL0106818	GFL0091999
Sample Date		Client Info		17 Jun 2024	22 Feb 2024	15 Dec 2023
Machine Age	hrs	Client Info		3346	2736	2161
Oil Age	hrs	Client Info		0	600	600
Filter Age	hrs	Client Info		0	600	600
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>50	28	9	24
Chromium	ppm	ASTM D5185m	>4	4	<1	2
Nickel	ppm	ASTM D5185m	>2	1	0	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	9	4	6
Lead	ppm	ASTM D5185m	>30	0	0	2
Copper	ppm	ASTM D5185m	>35	<1	<1	4
Tin	ppm	ASTM D5185m	>4	<1	0	0
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.

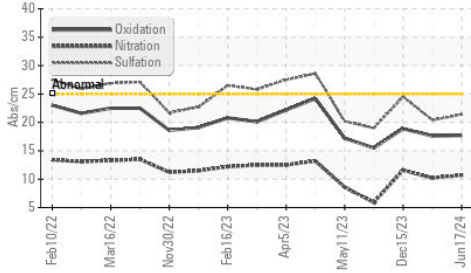
Silicon	ppm	ASTM D5185m	>+100	8	3	10
Potassium	ppm	ASTM D5185m	>20	4	0	16
Water		WC Method	>0.1	NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	10.7	10.2	11.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.4	20.4	24.5
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	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	>0.1	NEG	NEG	NEG

FLUID CONDITION

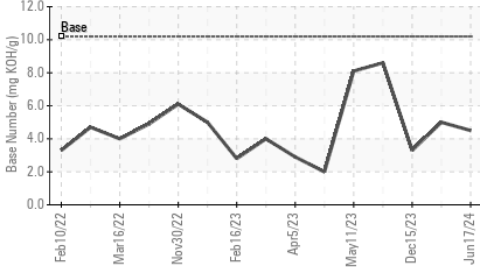
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		8	4	17
Boron	ppm	ASTM D5185m	50	8	3	2
Barium	ppm	ASTM D5185m	5	0	0	0
Molybdenum	ppm	ASTM D5185m	50	55	48	60
Manganese	ppm	ASTM D5185m	0	1	<1	<1
Magnesium	ppm	ASTM D5185m	560	630	524	713
Calcium	ppm	ASTM D5185m	1510	1712	1399	1414
Phosphorus	ppm	ASTM D5185m	780	804	655	759
Zinc	ppm	ASTM D5185m	870	1038	885	1087
Sulfur	ppm	ASTM D5185m	2040	2953	2210	2585
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.7	17.6	18.9
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	4.5	5.0	3.3
Visc @ 100°C	cSt	ASTM D445	15.1	14.7	14.6	14.6

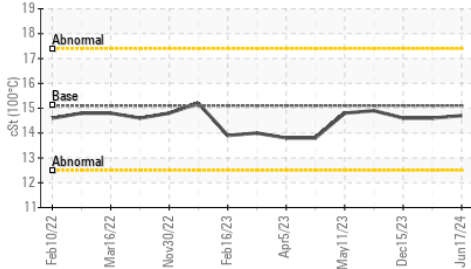
FT-IR (Direct Trend)



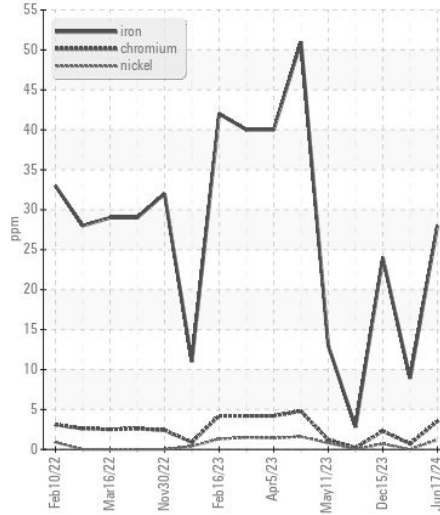
Base Number



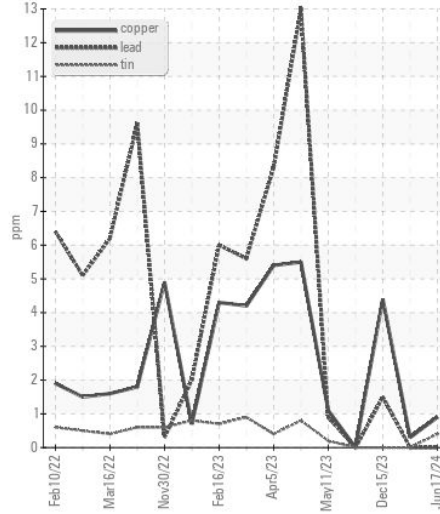
Viscosity @ 100°C



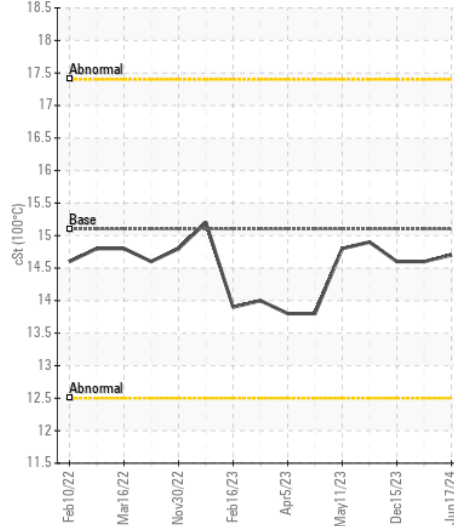
Ferrous Alloys



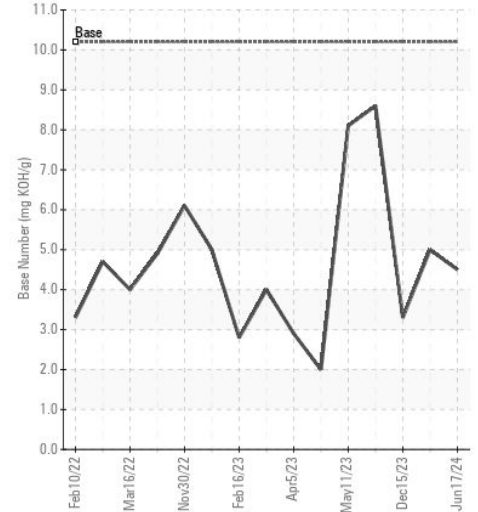
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0121768
Lab Number : 06216737
Unique Number : 11089601
Test Package : FLEET

Received : 21 Jun 2024
Tested : 24 Jun 2024
Diagnosed : 24 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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