



OIL ANALYSIS REPORT

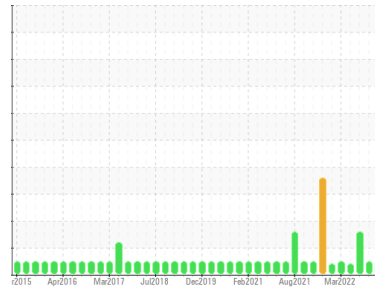
Area
(YA115772)

Machine Id
10364C

Component
Natural Gas Engine

Fluid
PETRO CANADA DURON GEO LD 15W40 (30 GAL)

Sample Rating Trend



NORMAL



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

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.

SAMPLE INFORMATION

method	limit/base	current	history1	history2	
Sample Number	Client Info	GFL0123418	GFL0082488	GFL0050778	
Sample Date	Client Info	18 Jun 2024	14 Nov 2023	20 Apr 2023	
Machine Age	mls	Client Info	177011	177011	13240
Oil Age	mls	Client Info	177011	177011	1217
Oil Changed	Client Info	N/A	Changed	Changed	
Sample Status		NORMAL	NORMAL	ABNORMAL	

CONTAMINATION

method	limit/base	current	history1	history2	
Water	WC Method	>0.1	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2		
Iron	ppm	ASTM D5185m	>50	12	8	20
Chromium	ppm	ASTM D5185m	>4	<1	<1	4
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	1	2	2
Lead	ppm	ASTM D5185m	>30	2	<1	11
Copper	ppm	ASTM D5185m	>35	<1	0	4
Tin	ppm	ASTM D5185m	>4	0	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES

method	limit/base	current	history1	history2		
Boron	ppm	ASTM D5185m	50	10	4	11
Barium	ppm	ASTM D5185m	5	0	<1	0
Molybdenum	ppm	ASTM D5185m	50	53	54	45
Manganese	ppm	ASTM D5185m	0	<1	<1	1
Magnesium	ppm	ASTM D5185m	560	587	541	461
Calcium	ppm	ASTM D5185m	1510	1828	1553	1410
Phosphorus	ppm	ASTM D5185m	780	787	693	667
Zinc	ppm	ASTM D5185m	870	1068	957	794
Sulfur	ppm	ASTM D5185m	2040	3014	2329	2653

CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185m	>+100	3	4	4
Sodium	ppm	ASTM D5185m		7	5	8
Potassium	ppm	ASTM D5185m	>20	2	1	<1

INFRA-RED

method	limit/base	current	history1	history2		
Soot %	%	*ASTM D7844		0	0	0
Nitration	Abs/cm	*ASTM D7624	>20	10.4	11.7	10.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.6	23.4	25.4

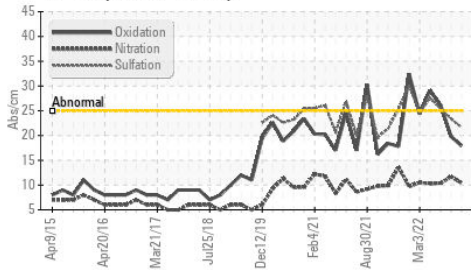
FLUID DEGRADATION

method	limit/base	current	history1	history2		
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.9	19.8	26.1
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	4.8	3.8	▲ 1.3

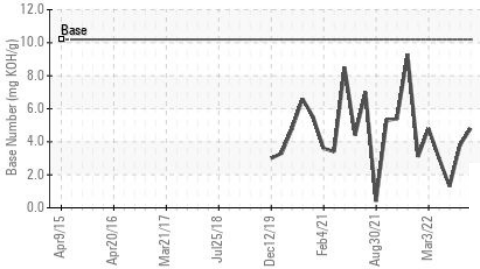


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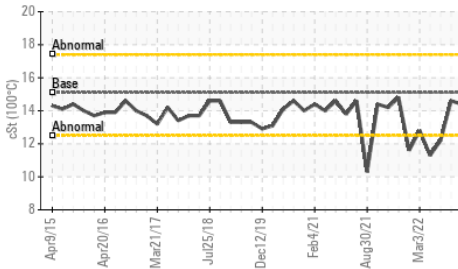
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C



VISUAL

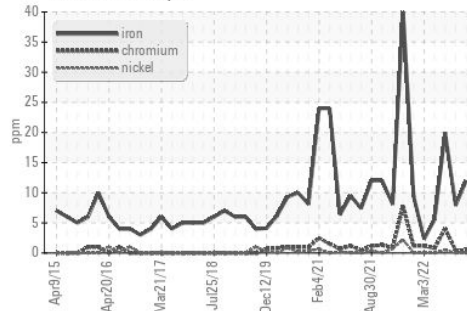
	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES

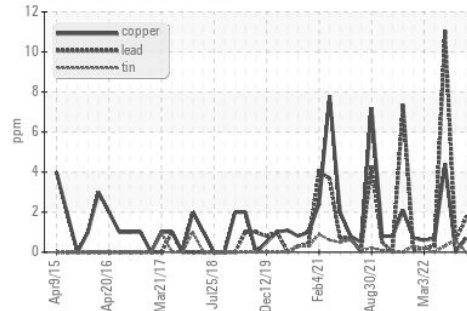
	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1	14.4	14.6

GRAPHS

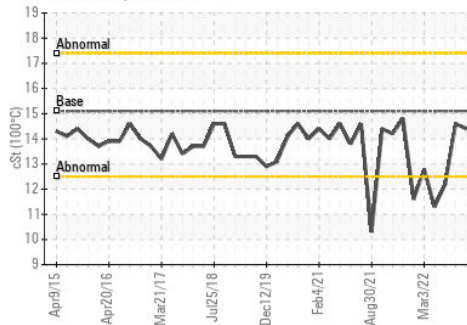
Ferrous Alloys



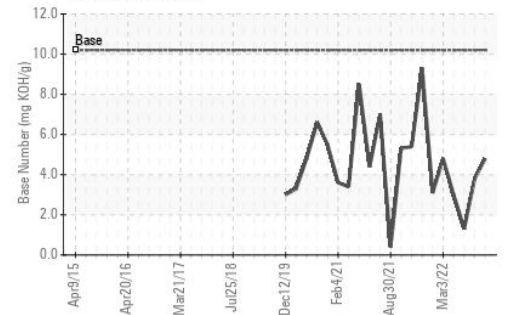
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0123418
 Lab Number : 06215543
 Unique Number : 11088407
 Test Package : FLEET

Received : 20 Jun 2024
 Tested : 21 Jun 2024
 Diagnosed : 21 Jun 2024 - Wes Davis

GFL Environmental - 007 - Brunswick
 2809 Galloway Road
 Bolivia, NC
 US 28422
 Contact: DONALD CRAVEN
 dcraven@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)

T:
 F: (910)253-4179