

OIL ANALYSIS REPORT

(YA115780) Nachine Id 10374C

Natural Gas Engine

CHEVRON DELO 400 NG (30 GAL)

-2015 Octo15 Novd016 Novd017 Jan2013 May2020 Jud0021 Aug2022

Sample Rating Trend



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.

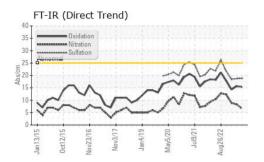
		12015 Oct20	5 Nov2016 Nov2017	Jan2019 May2020 Jul2021 A	ug2022	
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0123432	GFL0082450	GFL0082470
Sample Date		Client Info		30 May 2024	28 Aug 2023	17 Jul 2023
Machine Age	hrs	Client Info		14835	13590	13145
Oil Age	hrs	Client Info		150	445	1213
Oil Changed		Client Info		N/A	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	4	14	20
Chromium	ppm	ASTM D5185m	>4	<1	2	1
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	29
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	<1	2	3
Lead	ppm	ASTM D5185m	>30	<1	1	2
Copper	ppm	ASTM D5185m	>35	<1	1	2
Tin	ppm	ASTM D5185m	>4	0	1	0
Vanadium	ppm	ASTM D5185m		<1	0	<1
Cadmium	nnm	AOTAL DELOE		•		0
Cadmium	ppm	ASTM D5185m		0	<1	0
ADDITIVES	ррпі	method	limit/base	current	<1 history1	history2
	ppm		limit/base			_
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 42	history1 22	history2
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	limit/base	current 42 0	history1 22 44	history2 50 0
ADDITIVES Boron Barium Molybdenum	ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 42 0 49	history1 22 44 48	history2 50 0 65
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 42 0 49 <1	history1 22 44 48 1	history2 50 0 65
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 42 0 49 <1 604	history1 22 44 48 1 511	history2 50 0 65 1 202
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		current 42 0 49 <1 604 1719	history1 22 44 48 1 511 1420	history2 50 0 65 1 202 2174
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	method ASTM D5185m	800	current 42 0 49 <1 604 1719 878	history1 22 44 48 1 511 1420 703	history2 50 0 65 1 202 2174 1042
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	800	current 42 0 49 <1 604 1719 878 1066	history1 22 44 48 1 511 1420 703 882	history2 50 0 65 1 202 2174 1042 1309
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	800 880 limit/base	current 42 0 49 <1 604 1719 878 1066 3173	history1 22 44 48 1 511 1420 703 882 2587	history2 50 0 65 1 202 2174 1042 1309 4639
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	800 880 limit/base	current 42 0 49 <1 604 1719 878 1066 3173 current	history1 22 44 48 1 511 1420 703 882 2587 history1	history2 50 0 65 1 202 2174 1042 1309 4639 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	800 880 limit/base >+100	current 42 0 49 <1 604 1719 878 1066 3173 current	history1 22 44 48 1 511 1420 703 882 2587 history1 4	history2 50 0 65 1 202 2174 1042 1309 4639 history2 5
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm	method ASTM D5185m	800 880 limit/base >+100	current 42 0 49 <1 604 1719 878 1066 3173 current 3 4	history1 22 44 48 1 511 1420 703 882 2587 history1 4 6	history2 50 0 65 1 202 2174 1042 1309 4639 history2 5 4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	method ASTM D5185m	800 880 limit/base >+100 >20	current 42 0 49 <1 604 1719 878 1066 3173 current 3 4 2	history1 22 44 48 1 511 1420 703 882 2587 history1 4 6 4	history2 50 0 65 1 202 2174 1042 1309 4639 history2 5 4 6
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	800 880 limit/base >+100 >20 limit/base	current 42 0 49 <1 604 1719 878 1066 3173 current 3 4 2 current	history1 22 44 48 1 511 1420 703 882 2587 history1 4 6 4 history1	history2 50 0 65 1 202 2174 1042 1309 4639 history2 5 4 6 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m method ASTM D5185m	800 880 limit/base >+100 >20 limit/base	current 42 0 49 <1 604 1719 878 1066 3173 current 3 4 2 current	history1 22 44 48 1 511 1420 703 882 2587 history1 4 6 4 history1 0.1	history2 50 0 65 1 202 2174 1042 1309 4639 history2 5 4 6 history2 0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m method ASTM D5185m ASTM D5185m *ASTM D5185m ASTM D5185m *ASTM D5185m ASTM D76185m ASTM D76185m ASTM D76185m *ASTM D76185m	800 880 limit/base >+100 >20 limit/base	current 42 0 49 <1 604 1719 878 1066 3173 current 3 4 2 current 0 6.6	history1 22 44 48 1 511 1420 703 882 2587 history1 4 6 4 history1 0.1 8.3	history2 50 0 65 1 202 2174 1042 1309 4639 history2 5 4 6 history2 0 8.9
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m method ASTM D5185m ASTM D5185m *ASTM D5185m ASTM D5185m *ASTM D5185m ASTM D76185m ASTM D76185m ASTM D76185m *ASTM D76185m	800 880 limit/base >+100 >20 limit/base >20 >30 limit/base	current 42 0 49 <1 604 1719 878 1066 3173 current 3 4 2 current 0 6.6 18.8	history1 22 44 48 1 511 1420 703 882 2587 history1 4 6 4 history1 0.1 8.3 18.7	history2 50 0 65 1 202 2174 1042 1309 4639 history2 5 4 6 history2 0 8.9 18.5

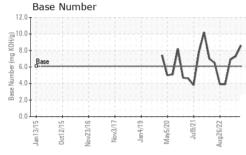
8.6

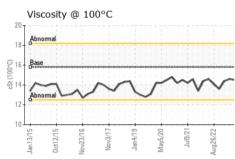
Base Number (BN) mg KOH/g ASTM D2896 6.1



OIL ANALYSIS REPORT



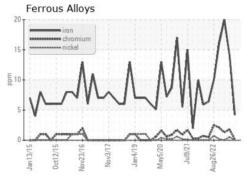


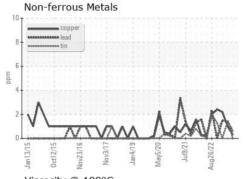


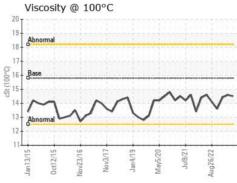
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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
Free Water	scalar	*Visual		NEG	NEG	NEG

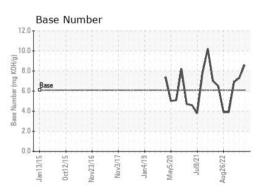
FLUID PROPERTIES		method				history2	
Visc @ 100°C	cSt	ASTM D445	15.8	14.5	14.6	14.4	

GRAPHS













Certificate 12367

Laboratory Sample No. Lab Number : 06215652 Unique Number : 11088516 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0123432

Received : 20 Jun 2024 **Tested** Diagnosed

: 21 Jun 2024 : 21 Jun 2024 - Wes Davis

GFL Environmental - 007 - Brunswick 2809 Galloway Road

Bolivia, NC US 28422

T:

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)

F: (910)253-4179

Report Id: GFL007 [WUSCAR] 06215652 (Generated: 06/21/2024 14:42:15) Rev: 1