



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id
323004-846
 Component
Gasoline Engine
 Fluid
CHEVRON DELO 400 XLE 15W40 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0096325	GFL0096271	GFL0064429
Sample Date		Client Info		27 Dec 2023	28 Nov 2023	11 Sep 2023
Machine Age	mls	Client Info		174179	147360	169781
Oil Age	mls	Client Info		149605	0	149605
Filter Age	mls	Client Info		149605	0	0
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Changed	Not Changd
Sample Status				ATTENTION	NORMAL	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>150	123	99	136
Chromium	ppm	ASTM D5185m	>20	3	2	<1
Nickel	ppm	ASTM D5185m	>5	1	<1	▲ 6
Titanium	ppm	ASTM D5185m		2	2	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>40	12	10	● 118
Lead	ppm	ASTM D5185m	>50	<1	0	1
Copper	ppm	ASTM D5185m	>155	2	1	54
Tin	ppm	ASTM D5185m	>10	<1	0	4
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

Fuel content negligible. There is no indication of any contamination in the oil.

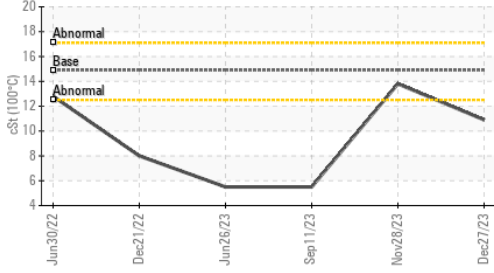
Silicon	ppm	ASTM D5185m	>30	16	14	16
Potassium	ppm	ASTM D5185m	>20	2	3	6
Fuel	%	ASTM D3524	>4.0	1.2	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	24.3	25.1	3.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	42.5	39.8	16.9
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	>0.2	NEG	NEG	NEG

FLUID CONDITION

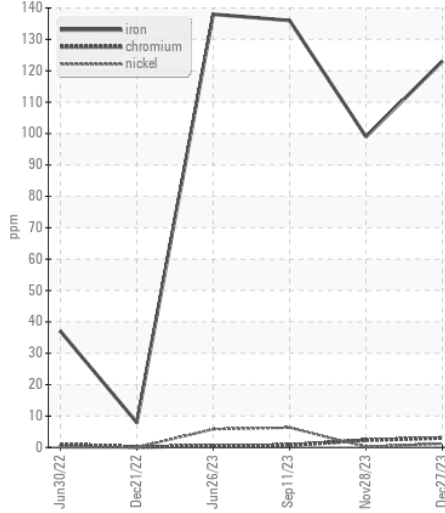
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m	>400	13	10	10
Boron	ppm	ASTM D5185m		32	34	48
Barium	ppm	ASTM D5185m		0	2	0
Molybdenum	ppm	ASTM D5185m		69	68	14
Manganese	ppm	ASTM D5185m		4	3	57
Magnesium	ppm	ASTM D5185m		634	540	13
Calcium	ppm	ASTM D5185m		1067	998	126
Phosphorus	ppm	ASTM D5185m	760	756	652	193
Zinc	ppm	ASTM D5185m	830	956	839	26
Sulfur	ppm	ASTM D5185m	2770	3230	3047	1270
Oxidation	Abs/.1mm	*ASTM D7414	>25	46.3	45.4	18.3
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	5.4	6.4	▲ 0.2
Visc @ 100°C	cSt	ASTM D445	14.9	▲ 10.9	13.8	5.5

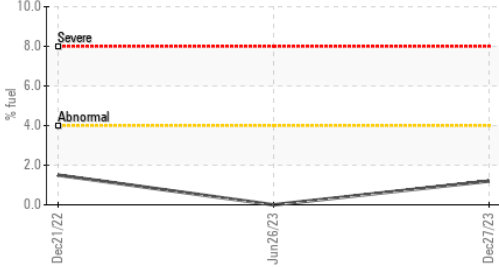
▲ Viscosity @ 100°C



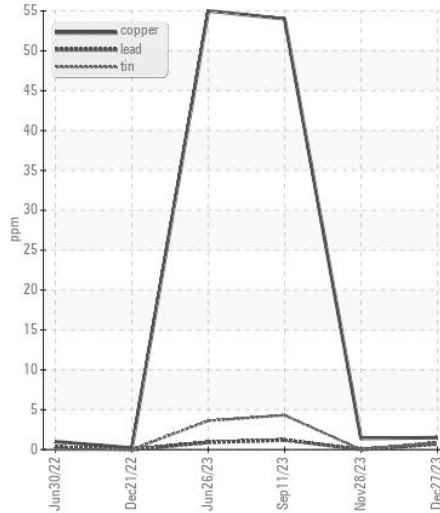
Ferrous Alloys



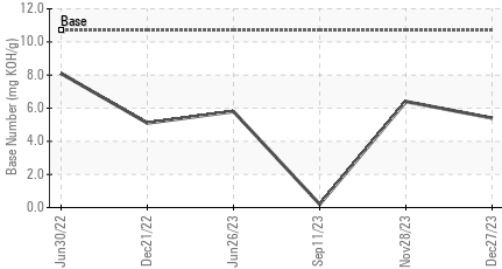
Fuel Dilution



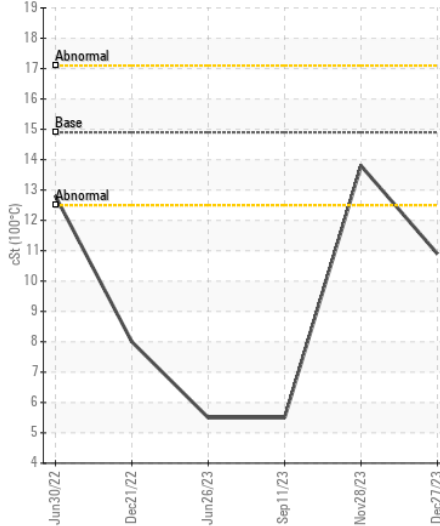
Non-ferrous Metals



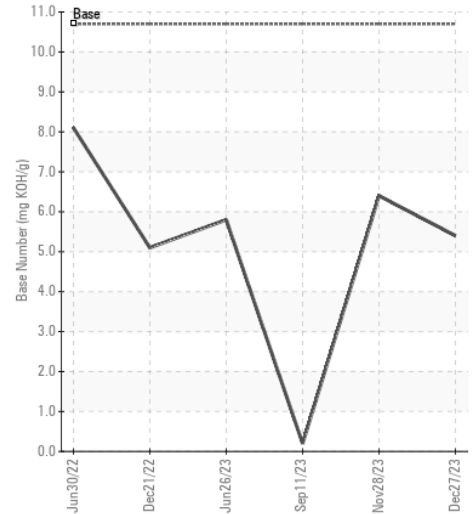
Base Number



▲ Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0096325 **Received** : 08 Jan 2024
Lab Number : 06054651 **Diagnosed** : 11 Jan 2024
Unique Number : 10820600 **Diagnostician** : Doug Bogart
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 624 - Elmira Hauling
 10164 M-32
 Elmira, MI
 US 49730
 Contact: ANDY GROBASKI
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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)