



WEAR	NORMAL
CONTAMINATION	MARGINAL
FLUID CONDITION	ABNORMAL

Machine Id
820018-101303

Component
Diesel Engine

Fluid
CHEVRON DELO 400 MULTIGRADE 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0102977	GFL0086414	GFL0086394
Sample Date		Client Info		15 Jan 2024	19 Dec 2023	19 Nov 2023
Machine Age	hrs	Client Info		9474	9313	9108
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	SEVERE	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	11	5	7
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	<1	1
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	1	<1	<1
Tin	ppm	ASTM D5185m	>15	0	0	<1
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

Light fuel dilution occurring.

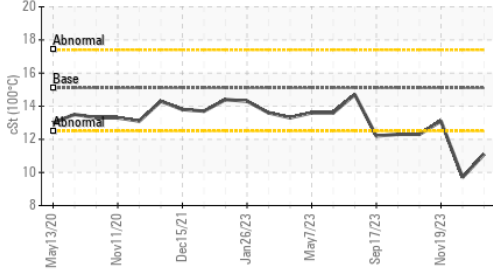
Silicon	ppm	ASTM D5185m	>25	4	3	3
Potassium	ppm	ASTM D5185m	>20	3	1	3
Fuel	%	ASTM D3524	>5	▲ 3.9	● 9.9	▲ 4.8
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.5	0.2	0.4
Nitration	Abs/cm	*ASTM D7624	>20	10.3	8.5	8.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.0	19.6	20.1
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

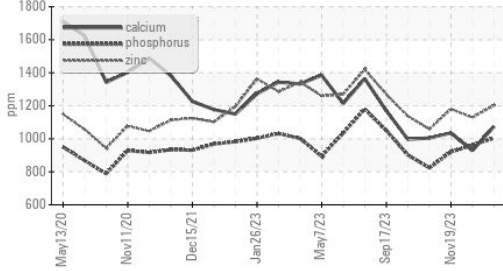
The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		15	10	26
Boron	ppm	ASTM D5185m		▲ 10	0	▲ 3
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		55	55	59
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		▲ 862	876	▲ 893
Calcium	ppm	ASTM D5185m		▲ 1075	929	▲ 1035
Phosphorus	ppm	ASTM D5185m	1360	▲ 1004	961	921
Zinc	ppm	ASTM D5185m	1480	1201	1129	1179
Sulfur	ppm	ASTM D5185m		2977	2906	2823
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.2	16.8	16.8
Base Number (BN)	mg KOH/g	ASTM D2896	12.2	8.1	8.5	8.8
Visc @ 100°C	cSt	ASTM D445	15.1	▲ 11.1	● 9.7	13.1

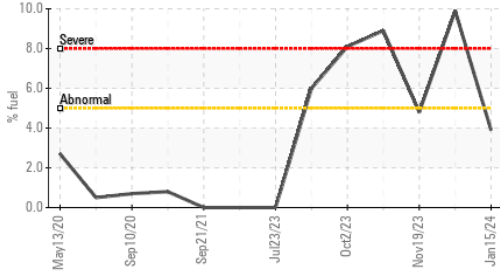
▲ Viscosity @ 100°C



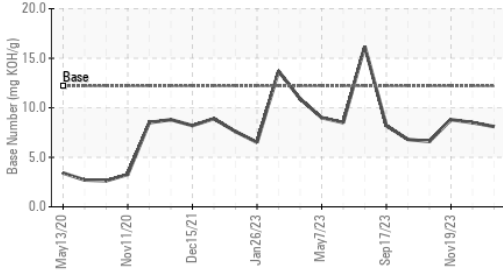
▲ Additives



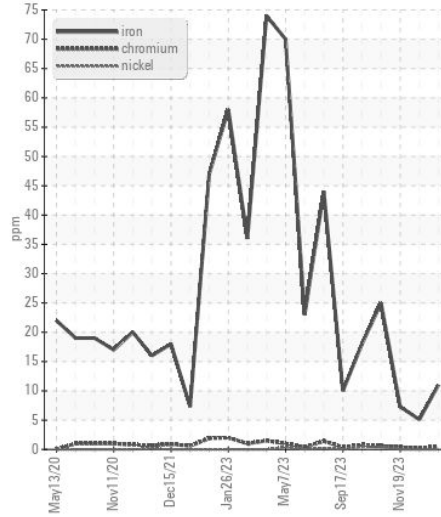
▲ Fuel Dilution



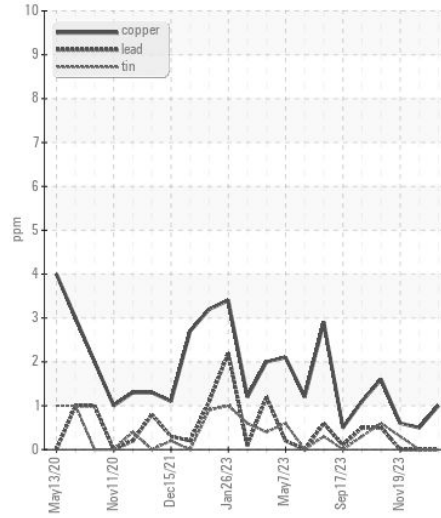
Base Number



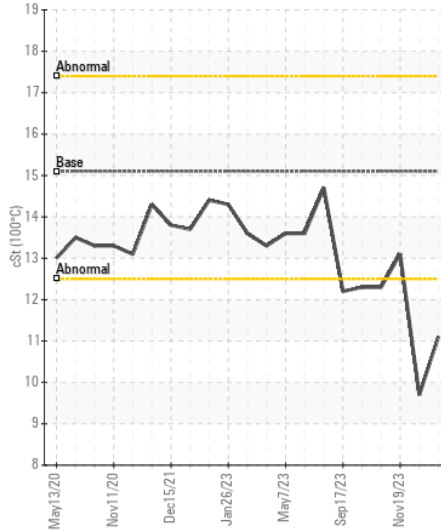
Ferrous Alloys



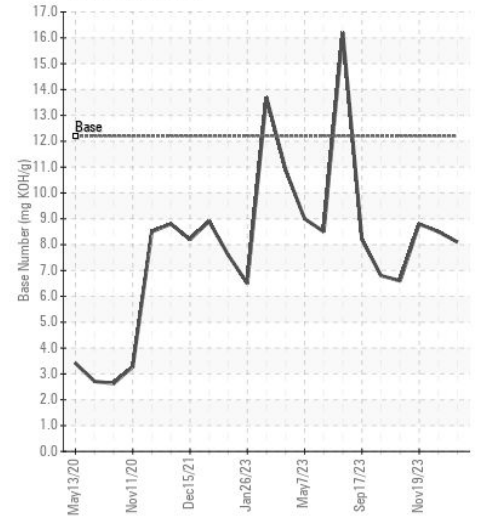
Non-ferrous Metals



▲ Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0102977 **Received** : 16 Jan 2024
Lab Number : 06061661 **Diagnosed** : 18 Jan 2024
Unique Number : 10833043 **Diagnostician** : Wes Davis
Test Package : FLEET (Additional Tests: PercentFuel)

GFL Environmental - 816 - WCA of South Arkansas
 3083 Smackover Hwy
 El Dorado, AR
 US 71730
 Contact: Mike Howell
 mike.howell@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: