



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Machine Id  
**928025-1123**  
Component  
**Diesel Engine**  
Fluid  
**CHEVRON DELO 400 XLE 15W40 (10 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0104667</b>	GFL0096282	GFL0096274
Sample Date		Client Info		<b>16 May 2024</b>	01 Feb 2024	28 Nov 2023
Machine Age	hrs	Client Info		<b>17856</b>	17284	17274
Oil Age	hrs	Client Info		<b>600</b>	17284	0
Filter Age	hrs	Client Info		<b>600</b>	650	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Not Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	<b>75</b>	42	36
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	1	<1
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	>2	<b>5</b>	10	11
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>18</b>	21	18
Lead	ppm	ASTM D5185m	>40	<b>1</b>	<1	0
Copper	ppm	ASTM D5185m	>330	<b>2</b>	1	1
Tin	ppm	ASTM D5185m	>15	<b>1</b>	1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

There is no indication of any contamination in the oil.

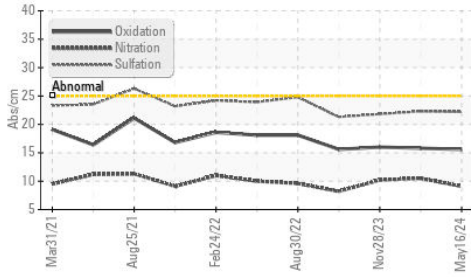
Silicon	ppm	ASTM D5185m	>25	<b>18</b>	10	12
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	2	4
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>4	<b>0.7</b>	0.5	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.1</b>	10.5	10.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.2</b>	22.3	21.8
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

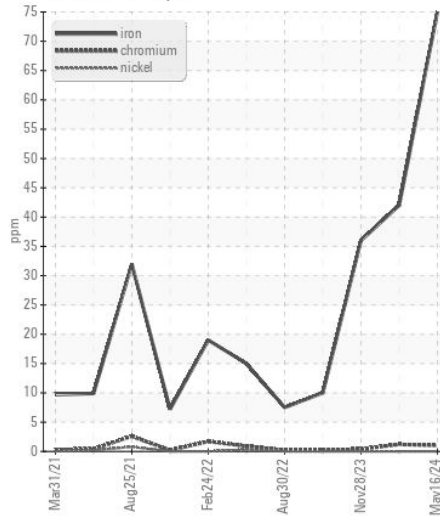
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>7</b>	7	4
Boron	ppm	ASTM D5185m		<b>221</b>	84	85
Barium	ppm	ASTM D5185m		<b>0</b>	0	2
Molybdenum	ppm	ASTM D5185m		<b>69</b>	53	52
Manganese	ppm	ASTM D5185m		<b>2</b>	<1	0
Magnesium	ppm	ASTM D5185m		<b>529</b>	702	653
Calcium	ppm	ASTM D5185m		<b>1467</b>	1460	1436
Phosphorus	ppm	ASTM D5185m	760	<b>894</b>	710	673
Zinc	ppm	ASTM D5185m	830	<b>1035</b>	839	791
Sulfur	ppm	ASTM D5185m	2770	<b>3431</b>	2931	2954
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.6</b>	15.8	16.0
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	<b>5.7</b>	5.7	5.6
Visc @ 100°C	cSt	ASTM D445	14.9	<b>13.3</b>	13.1	13.2

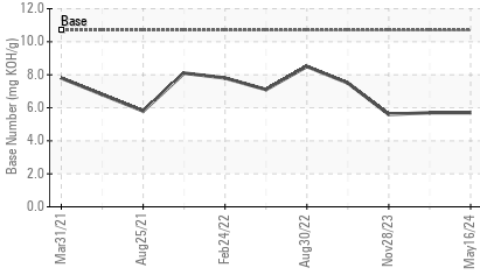
**FT-IR (Direct Trend)**



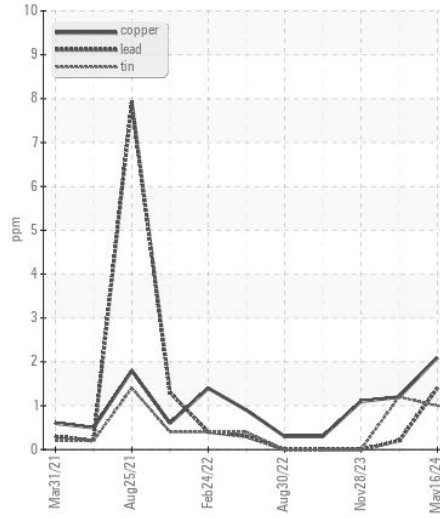
**Ferrous Alloys**



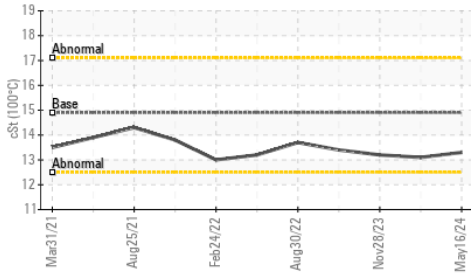
**Base Number**



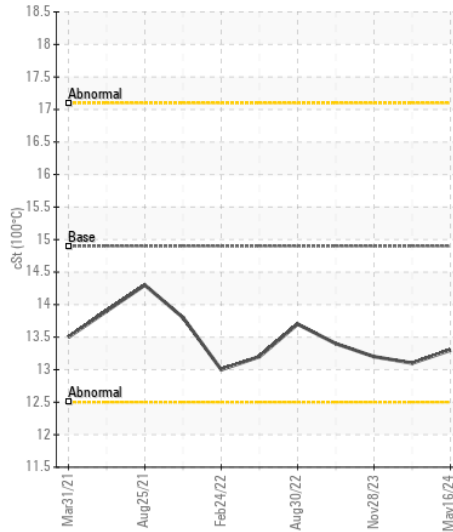
**Non-ferrous Metals**



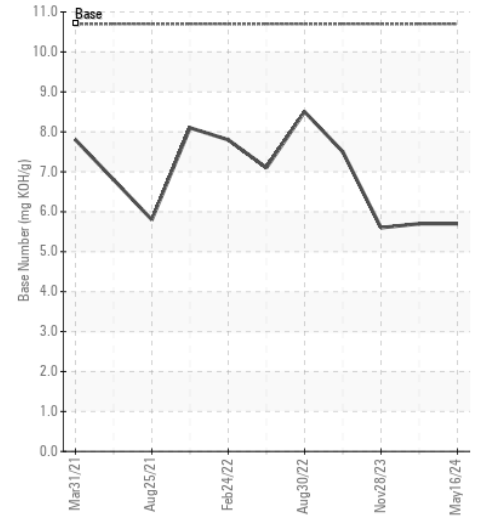
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0104667  
**Lab Number** : 06187133  
**Unique Number** : 11043885  
**Test Package** : FLEET

**Received** : 21 May 2024  
**Tested** : 23 May 2024  
**Diagnosed** : 23 May 2024 - Wes Davis

**GFL Environmental - 624 - Elmira Hauling**  
 10164 M-32  
 Elmira, MI  
 US 49730

Contact: ANDY GROBASKI  
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F:

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)