



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

Machine Id  
**123008-746**  
 Component  
**Diesel Engine**  
 Fluid  
**CHEVRON DELO 400 XLE 15W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0122754</b>	GFL0096085	GFL0084503
Sample Date		Client Info		<b>08 Jul 2024</b>	13 Feb 2024	11 Sep 2023
Machine Age	hrs	Client Info		<b>19231</b>	18591	17990
Oil Age	hrs	Client Info		<b>640</b>	601	738
Filter Age	hrs	Client Info		<b>640</b>	601	738
Oil Changed		Client Info		<b>Changed</b>	Changed	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	>110	<b>18</b>	14	24
Chromium	ppm	ASTM D5185m	>4	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>9</b>	12	14
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>2</b>	3	4
Lead	ppm	ASTM D5185m	>45	<b>2</b>	3	6
Copper	ppm	ASTM D5185m	>85	<b>0</b>	1	1
Tin	ppm	ASTM D5185m	>4	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	<1
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.

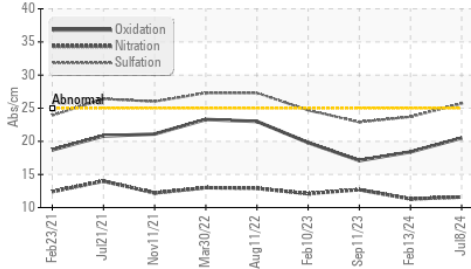
Silicon	ppm	ASTM D5185m	>30	<b>5</b>	6	6
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	4	5
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.8</b>	0.9	0.8
Nitration	Abs/cm	*ASTM D7624	>20	<b>11.6</b>	11.3	12.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>25.7</b>	23.7	22.9
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**

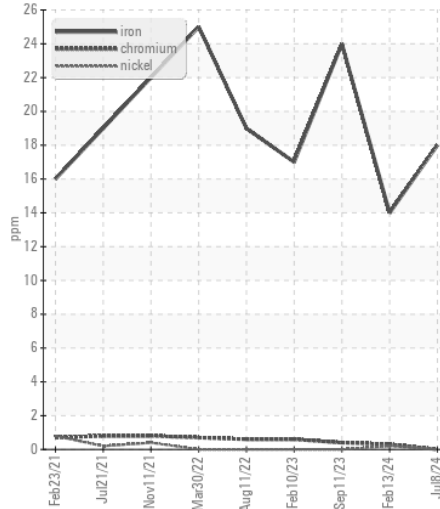
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>4</b>	5	6
Boron	ppm	ASTM D5185m		<b>91</b>	91	64
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>64</b>	54	48
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>668</b>	683	741
Calcium	ppm	ASTM D5185m		<b>1614</b>	1462	1834
Phosphorus	ppm	ASTM D5185m	760	<b>986</b>	728	722
Zinc	ppm	ASTM D5185m	830	<b>1136</b>	892	903
Sulfur	ppm	ASTM D5185m	2770	<b>3990</b>	2982	3912
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>20.5</b>	18.4	17.1
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	<b>6.2</b>	6.3	6.0
Visc @ 100°C	cSt	ASTM D445	14.9	<b>14.2</b>	14.2	14.2

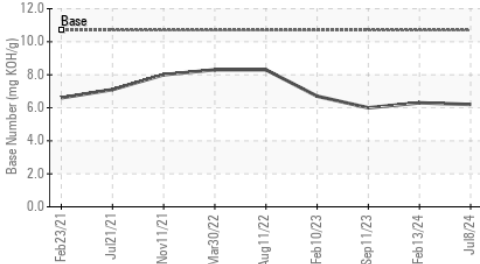
**FT-IR (Direct Trend)**



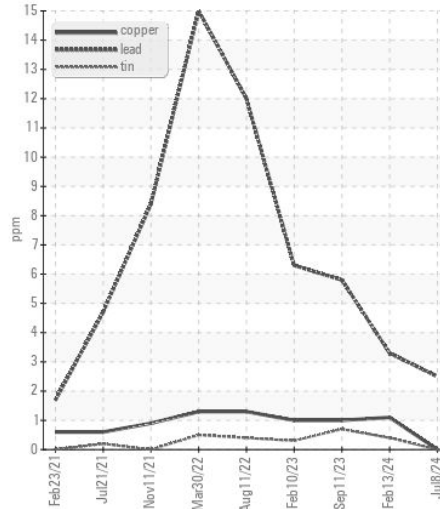
**Ferrous Alloys**



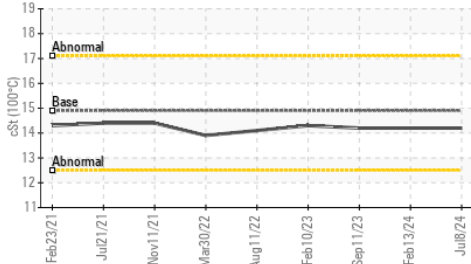
**Base Number**



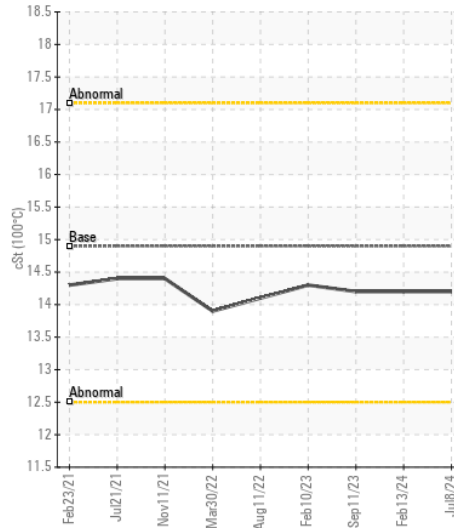
**Non-ferrous Metals**



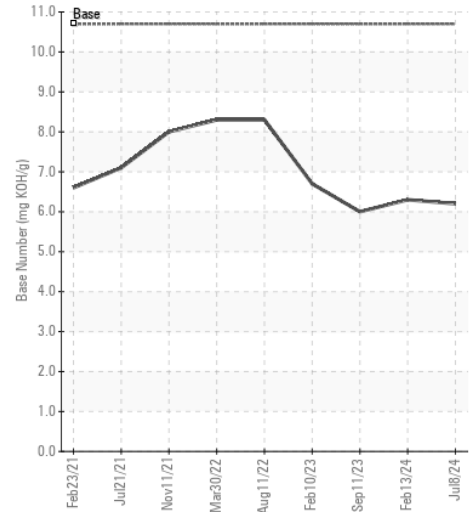
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0122754  
**Lab Number** : 06232964  
**Unique Number** : 11116457  
**Test Package** : FLEET

**GFL Environmental - 629 - Northern A1**  
 3947 US 131 N  
 Kalkaska, MI  
 US 49646-8428  
 Contact: MITCH HERSHBERGER

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: (231)624-0848

F: