



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



Machine Id  
**925035-142576**  
Component  
**Diesel Engine**  
Fluid  
**CHEVRON DELO 400 MULTIGRADE 15W40 (--- LTR)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0115787</b>	GFL0103464	GFL0103456
Sample Date		Client Info		<b>17 May 2024</b>	08 Apr 2024	08 Mar 2024
Machine Age	hrs	Client Info		<b>17449</b>	17363	17249
Oil Age	hrs	Client Info		<b>419</b>	333	219
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Not Changd</b>	Not Changd	Not Changd
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	ATTENTION

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	<b>12</b>	9	11
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>7</b>	5	3
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	2	0
Copper	ppm	ASTM D5185m	>330	<b>13</b>	10	228
Tin	ppm	ASTM D5185m	>15	<b>1</b>	2	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</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.

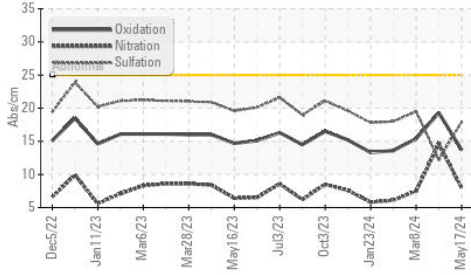
Silicon	ppm	ASTM D5185m	>25	<b>7</b>	5	7
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	4	8
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>4	<b>0.3</b>	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.0</b>	14.6	7.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.9</b>	12.2	19.5
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**

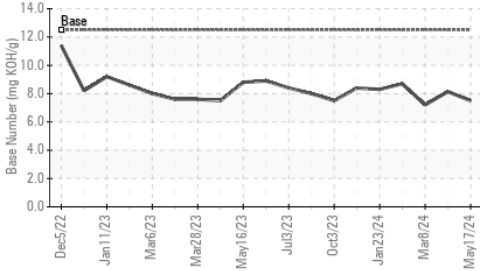
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>4</b>	49	3
Boron	ppm	ASTM D5185m	151	<b>23</b>	35	18
Barium	ppm	ASTM D5185m	0.4	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	250	<b>75</b>	73	75
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m	0	<b>849</b>	954	844
Calcium	ppm	ASTM D5185m	2046	<b>1139</b>	1218	1098
Phosphorus	ppm	ASTM D5185m	1043	<b>1011</b>	1096	942
Zinc	ppm	ASTM D5185m	943	<b>1138</b>	1354	1138
Sulfur	ppm	ASTM D5185m	5012	<b>3334</b>	3989	2811
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.7</b>	19.3	15.4
Base Number (BN)	mg KOH/g	ASTM D2896	12.5	<b>7.5</b>	8.14	7.2
Visc @ 100°C	cSt	ASTM D445	14.4	<b>12.8</b>	12.7	12.7

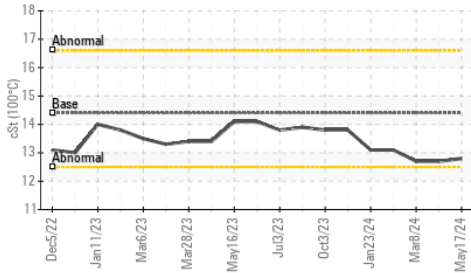
**FT-IR (Direct Trend)**



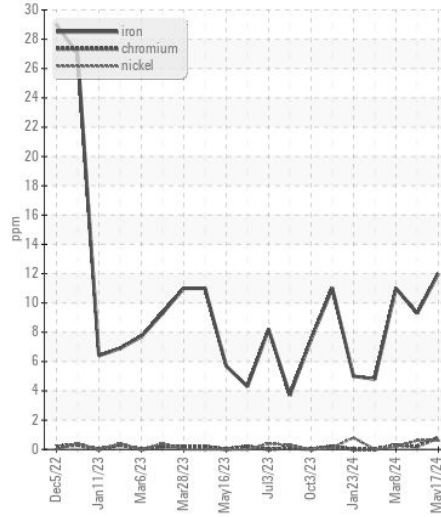
**Base Number**



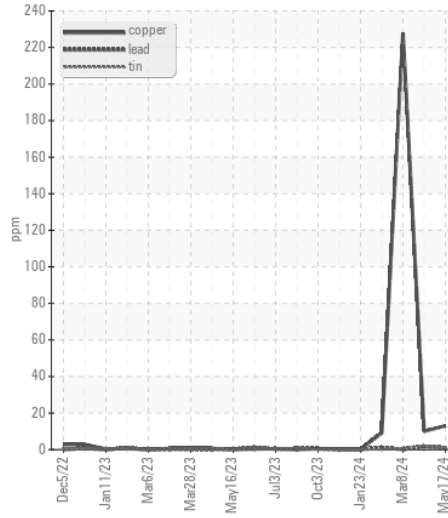
**Viscosity @ 100°C**



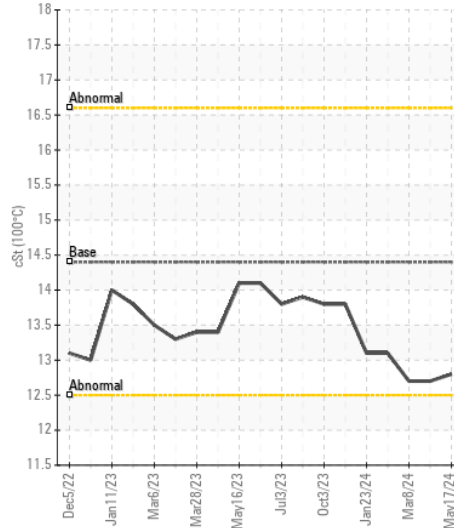
**Ferrous Alloys**



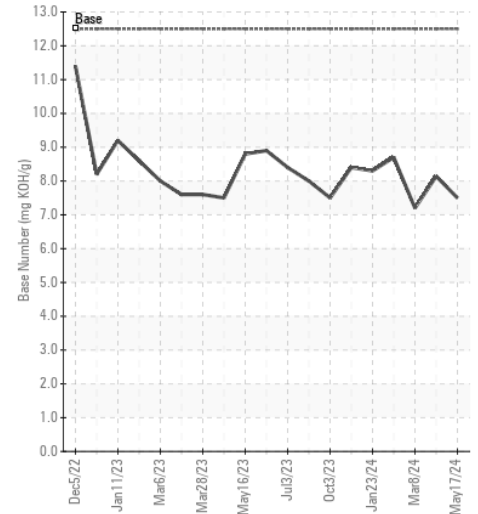
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0115787  
**Lab Number** : 06187358  
**Unique Number** : 11044110  
**Test Package** : FLEET

**Received** : 22 May 2024  
**Tested** : 23 May 2024  
**Diagnosed** : 24 May 2024 - Sean Felton

**GFL Environmental - 180 - Tuscaloosa Hauling**  
 4701 12TH ST NE  
 Tuscaloosa, AL  
 US 35404

Contact: FREDERICK ROGERS  
 fred.rogers@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)

T:  
F: