



# OIL ANALYSIS REPORT

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

Machine Id  
**13012**  
Component  
**Diesel Engine**  
Fluid  
**CHEVRON DELO 400 XLE 10W30 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0896014</b>	WC0833152	WC0833186
Sample Date		Client Info		<b>15 Apr 2024</b>	14 Nov 2023	21 Aug 2023
Machine Age	mls	Client Info		<b>103392</b>	55812	16629
Oil Age	mls	Client Info		<b>47097</b>	40000	16629
Filter Age	mls	Client Info		<b>47097</b>	40000	16629
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	>100	<b>42</b>	32	37
Chromium	ppm	ASTM D5185m	>20	<b>2</b>	<1	2
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>8</b>	15	14
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185m	>330	<b>2</b>	2	6
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	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.

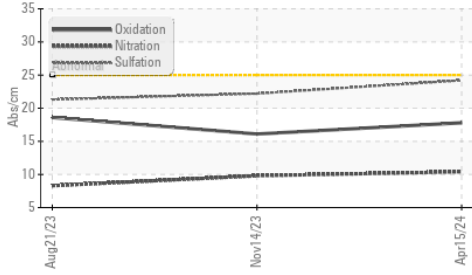
Silicon	ppm	ASTM D5185m	>25	<b>12</b>	8	17
Potassium	ppm	ASTM D5185m	>20	<b>26</b>	47	47
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>1</b>	0.9	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.4</b>	9.8	8.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>24.2</b>	22.2	21.3
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

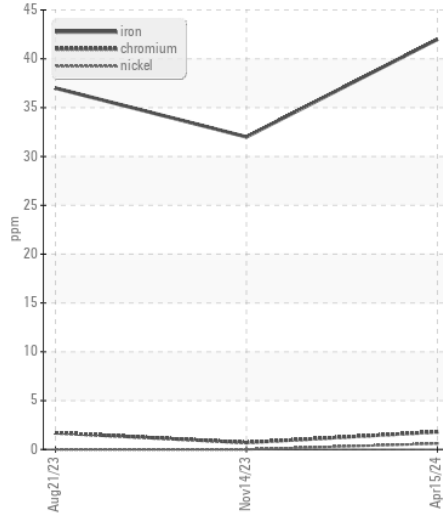
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>2</b>	3	7
Boron	ppm	ASTM D5185m		<b>22</b>	22	49
Barium	ppm	ASTM D5185m		<b>1</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>2</b>	7	38
Manganese	ppm	ASTM D5185m		<b>1</b>	<1	2
Magnesium	ppm	ASTM D5185m		<b>764</b>	723	562
Calcium	ppm	ASTM D5185m	2900	<b>1389</b>	1327	1689
Phosphorus	ppm	ASTM D5185m	1100	<b>767</b>	674	719
Zinc	ppm	ASTM D5185m	1200	<b>848</b>	846	876
Sulfur	ppm	ASTM D5185m	4000	<b>3236</b>	2705	2732
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>17.8</b>	16.1	18.6
Base Number (BN)	mg KOH/g	ASTM D2896	10.3	<b>5.8</b>	6.8	10.0
Visc @ 100°C	cSt	ASTM D445	11.9	<b>11.6</b>	11.6	10.1

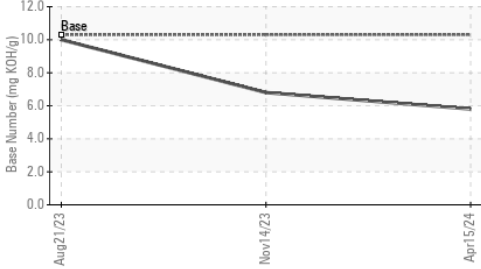
**FT-IR (Direct Trend)**



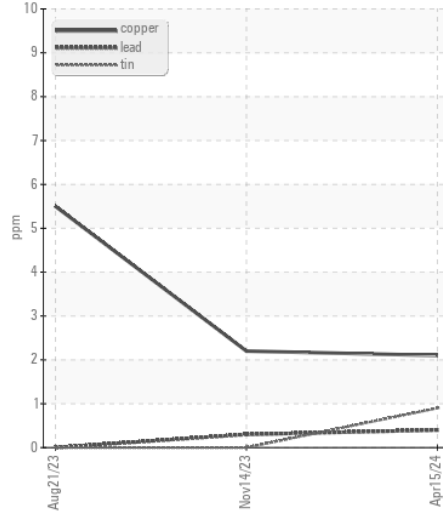
**Ferrous Alloys**



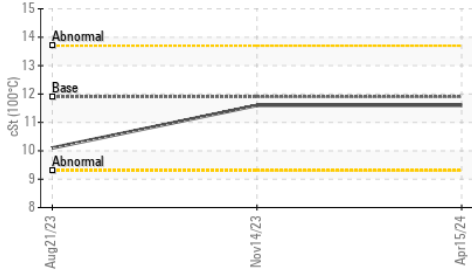
**Base Number**



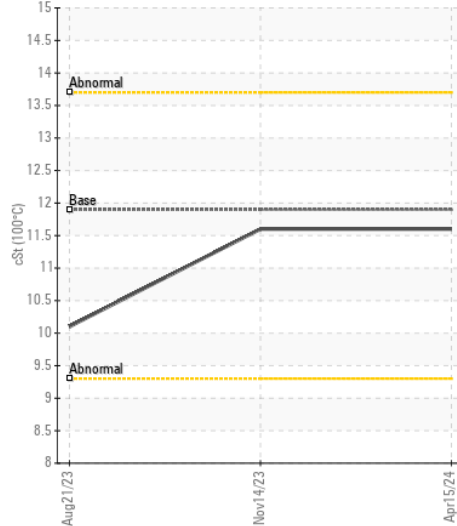
**Non-ferrous Metals**



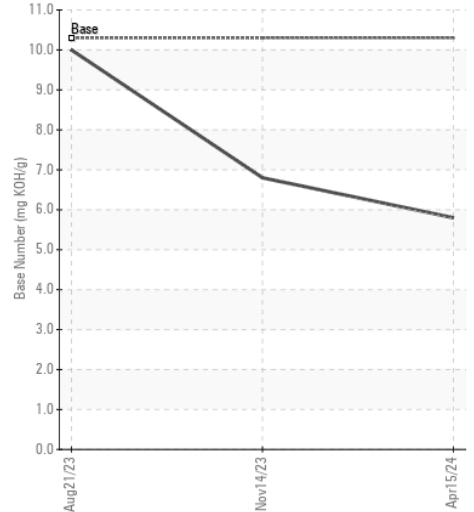
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0896014  
**Lab Number** : 06149851  
**Unique Number** : 10979929  
**Test Package** : FLEET

**Received** : 16 Apr 2024  
**Tested** : 17 Apr 2024  
**Diagnosed** : 17 Apr 2024 - Wes Davis

**LTI/MILKY WAY - MOSES**  
 120 WISER LANE  
 MOSES LAKE, WA  
 US 98837

Contact: MIGUEL PEREZ  
 mperez@lynden.com; doug@wearcheckusa.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: (509)765-5840  
 F: (509)765-5636